Construction Financing in Saudi Arabia

by

Salah Uthman Al-Dulaijan

A Thesis Presented to the

FACULTY OF THE COLLEGE OF GRADUATE STUDIES

KING FAHD UNIVERSITY OF PETROLEUM & MINERALS

DHAHRAN, SAUDI ARABIA

In Partial Fulfillment of the
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This thesis, written by SALAH UTHMAN AL-DULAIJAN under the direction of his Thesis Committee, and approved by all its members, has been presented to and accepted by the Dean, College of Graduate Studies, in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE IN CONSTRUCTION ENGINEERING AND MANAGEMENT.

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I wish to dedicate this work to my beloved parents, brothers, friends, and all those who have been instrumental in helping me to successfully complete my study.

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صـــلاح عثمـــان الدليجـــان

الخلاصـــــــه

ان هذه الرساله تتعلق على دراسة نظام تمويل المشاريع الانشائيـــه فى المملكه العربيه السعوديه،لقد تغير هذا النظام بشكل ملموس خلال الخمســة سنوات الماضيه وذلك لتقلب سوق المناقصات الانشائيه ويعزى التقلب فى هذا السوق لانخفاض نسبة الارباح وشدة المنافسه فى العروض وقلة السيوله المتوفره

ولقد تم ايضا اختبار نظام تمويل المقاولين من حيث المصـــــــادر والاحتياجات فى هذه الدراسه .

ونوقش نظام التمويل للمقاولين من ثلاث جوانب وهى البحث المكتبـــــى والمسح الميدانى لخمس بنوك تجاريه واعداد مسح شامل لعشرون مقاولا مـــن مختلف التصانيف الفنيه وبمبالغ أكثر من ثلاثين مليون ريالا للمشاريع المنفذه بمعدلها السنوى . وقد استنتج ان البنوك التجاريه هى من اهم المصـــادر للتمويل الخارجى للمقاولين . اما التمويل الداخلى فيتمثل من رؤوس أموال المقاولين ومكاسبهم المستثمره والمستخلصات الماليه من اصحـــــاب المشاريـــع ، وفيما يلـــى بعض التسهيـــلات البنكيـــه التى توفرهـــا البنوك التجاريـــه لعملائها المقاولين : تسهيلات التسليف (قـــروض قصيره الاجـــل ، السحـــب على المكشـــوف ، تمويـــل المستخلصات للمقاولين والقروض المتوسطه والطويله الاجـــل) والضمانات البنكيـــه وتسهيـــلات الايجـــار والاعتمادات البنكيـــه والتسهيلات الوقائيـــه التى تحـــد من خطـــورة الاوضـــاع الماليـــه وتمويـــل المناقصات الكبيـــره عن طريـــق اشتراك عدة بنـــوك تجاريـــه .

وقد تم حصر متطلبات البنوك التجاريه من حيـــث المعلومـــــات

اللازم توفرهـــا من المقاوليـــن ، وفعاليـــة الضمانات المقدمـــــــه وايضا تم حصـــر كـل المتطلبات الواجـــب تقديمها لاصحـــاب المشاريـــع (الدوائـــر والمؤسســـات الحكوميـــه) للحصـــول على المستخلصـــات النهائيـــه من الاموال .

وتمت مناقشـــة نظام غرامات التأخيـــر فى تسليـــم المشاريع والمشاكـل الماليـــه الرئيسيـــه التى تواجـــه المقاولين .

وبالاضافه الى ماسبق فان الرساله تتضمن دراستان عن كيفيـــــة تقييـــم البنوك التجاريـــه للمقاوليـــن للحصـــول على الموافقه لتمويـــل مشاريعهـــم.

ABSTRACT

This thesis studied the construction financial system in Saudi Arabia. This system has changed drastically in the last five years due to a volatile construction market industry, characterized by low margins, intense competition, and liquidity problems.

Contractor's financing system (sources and requirements) is examined in this study. This financial system was studied from three sources: literature review, meetings with five Saudi commercial banks, and from conducting a survey of twenty contractors, with different classifications and with an average annual volume of work of more than SR:30 million.

It was found that commercial banks are the main source of contractor financing externally. Internal financing is mainly from paid-in capital, retained earnings, and contract proceeds.

The following financial facilities from commercial banks are discussed: credit facilities (short loans, line of credits, progress payment financing, medium and long term loans), contract bonds, leasing facilities, documentary letter of credit facilities, hedging facilities, and financing by syndicate facilities. All types of commercial bank requirements, covering both the required information and securities were examined. Owners (government and semi-government) requirements from contractors to release final payments/

retention monies were also examined. Penalties and major financial problems were identified.

Moreover, two case studies were presented to describe the way in which commercial banks evaluate contractors for the purpose of credit approvals.

CHAPTER 1

INTRODUCTION

1.1 Objective

The objective is mainly to study contractor financing systems used in Saudi Arabia - types of construction financing facilities, their sources, requirements for obtaining them and major financial problems faced by contractors.

1.2 Scope

The scope and limitations of this thesis are as follows :

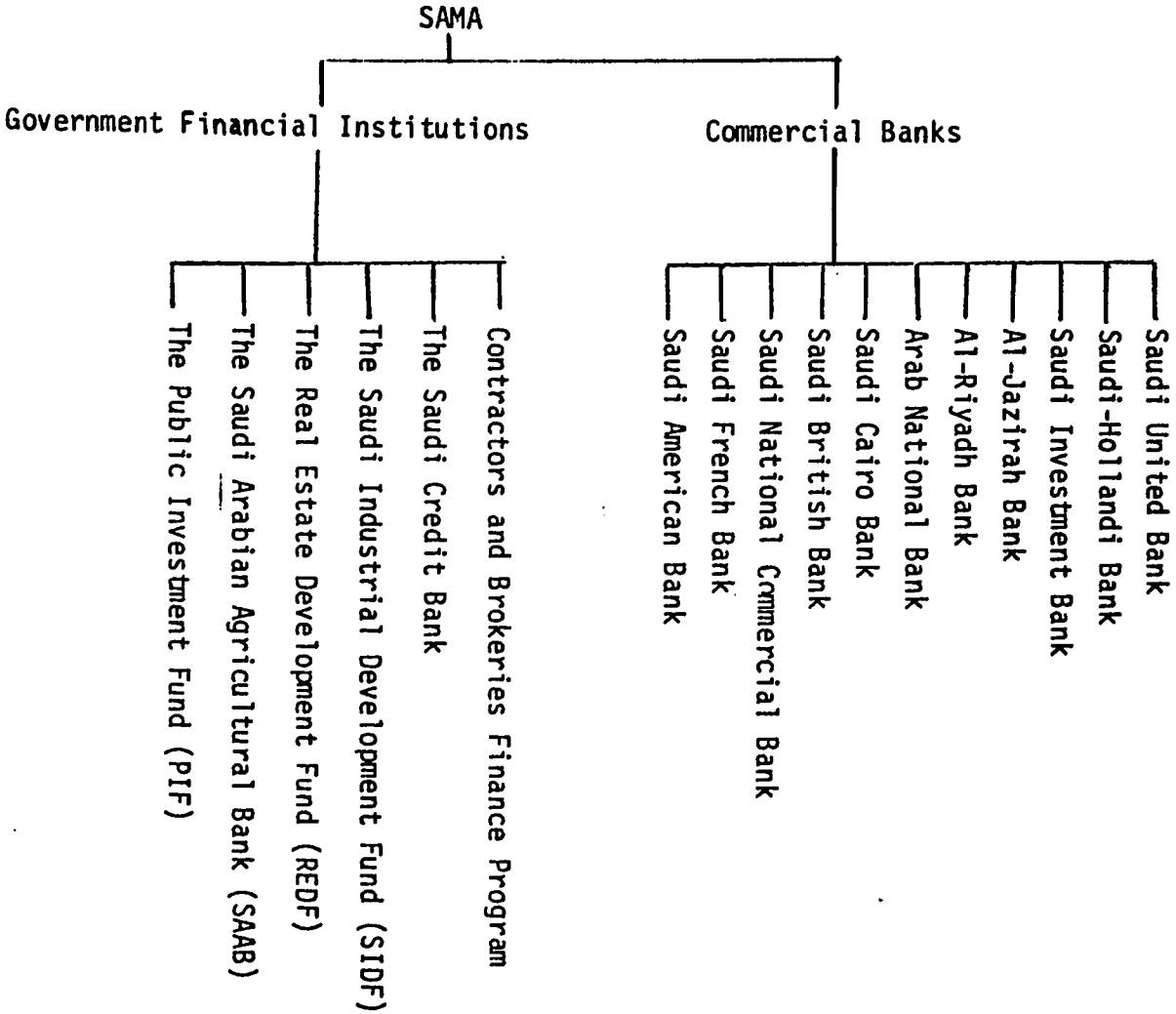
- Only contractors' financing system will be studied.
- Only contracts that are related to government and semi-government agencies will be considered.
- The focus will be towards commercial banks and their relations to contractors.

1.3 Financial Background

The Saudi Arabian Financial system consists of the Ministry of Finance and National Economy (MFNE) at the top (Fig.1.1)

(Fig. 1.1)

Ministry of Finance and National Economy



which has the ultimate control of the financial sector. Under MFNE is the Saudi Arabian Monetary Agency (SAMA) which was established in 1952 and which has acquired the characteristics of the Central Bank. Its functions are the following:

1. regulation of the money supply
2. stabilization of the external value of Saudi Riyal
3. supervision of banking activities and the financial system
4. serving as Government banker
5. management of foreign reserves
6. promotion of economic development
7. undertaking financial and economic research

The overall coordination, guidance and regulation of the domestic financial sector is accomplished through the offices of SAMA. It has the authority to acquire information from commercial banks and to determine the level of special deposits to effectively control the private bank credit. (24)

There are eleven commercial banks in Saudi Arabia, as follows :

- Saudi American Bank
- Saudi French Bank
- Saudi National Commercial Bank
- Saudi British Bank
- Saudi Cairo Bank
- Arab National Bank
- Al-Jazira Bank

- Saudi Investment Bank
- Saudi Holland Bank
- Saudi United Commercial Bank
- Riyad Bank

These commercial banks have tended to concentrate on short-term loans, mainly to traders and contractors. Banks regard long-term loans as too risky from the point of view of rational banking, and would instead rather give out loans on a short-term basis to trading and contracting firms which will be able to pay back quickly after the imported goods, which were financed by the banks, have been sold or after the contractors have executed their works and received their payments. Commercial banks are required not to give a single loan or credit in excess of 25% of their reserves and paid-up capital. In Chapter 2, there will be more details about commercial banks activities with contractors. (24)

Saudi Arabian Government Financial Institutions

Since commercial banks are concentrating mainly on short-term loans, a feasible alternative is to create Government financial institutions capable of filling up gaps which have been created by commercial banks' profit motive.

Since 1965, a number of such financial institutions have been set up by the Government, in co-operation with SAMA, to carry out the development plan. In these institutions, Government funds

were established to provide medium and long-term development loans. These loans are made interest free, but sometimes a small service charge is levied. These institutions are as follows :

1. The Public Investment Fund (PIF)

PIF, sometimes referred to as General Investment Fund, is a division of the Ministry of Finance and National Economy. It was established in 1971 with the objective of diversifying the economy. It provides financing to public sector organizations in the form of loans (medium and long-term). The loans are interest free, although, depending upon the size of the project, a small handling charge is sometimes levied. Not only must the projects funded by PIF be commercially viable, they must also have an important role in the Kingdom's development. At the beginning of 1980, the Fund had extended SR:10 billion in the form of loans. Recently, Saudi Arabian Airlines (SAUDIA), Petromin and Saudi Arabian Basic Industries (SABIC) were the beneficiaries of this fund. (24,27).

2. The Saudi Arabian Agricultural Bank (SAAB)

Agricultural loans have been the lowest of all loans to any sector in the economy in any year in the history of commercial banking in Saudi Arabia. Since 1975, there has been no year in which loans granted by commercial banks for agriculture and fishing purposes were up to 0.7 percent of total commercial banks. In 1965, SAAB was established to advance credits to both public and

private agricultural activities. With an initial capital of SR:10 million, its activities have been expanded to the point that almost SR:586 million were loaned in 1978 and reached a peak of over SR:4,000 million in 1982-83.

The policy of lending is as follows. The maximum portion of financing available from SAAB for projects exceeding SR:3 million is 60% and for projects below SR:3 million, SAAB will lend up to 80% of the cost.

Concerning the structure of credit, the share of lending accounted for by construction activities, well drilling and casings has increased from 16% in 1975-76 to over 41%. The increase was mainly at the expense of loans for vehicles, machinery, animals and feedstuff which fell from 61% to 33%. Loans for engines, pumps, ploughs, fertilizer and seed maintained their share at between 18% and 20% over the period. Table 1.1 shows the loans that were granted to agricultural sector by SAAB compared with commercial banks in the period 1979-1984. A more interesting characteristic of the loans given by SAAB which Table 1.2 brings out is the composition of the loans (short and medium-term loans) in the period 1980-1984. Table 1.3 shows the incentives for agricultural production

From these tables, as a conclusion, agricultural loans are mainly medium-term loans, with a few short-term loans. These loans are granted without handling or service charges. In the period 1980-1984, SAAB loans accounted for approximately 86% of all loans to agriculture. In 1983-84, the commercial banks

TABLE (1.1)

LOANS TO AGRICULTURE

(SR million)

	1399/14	1400/01	1401/02	1402/03	1403/04
Agricultural Bank (SAAB)	1,129	2,531	2,933	4,166	3,496
Commercial Bank	169	232	408	495	931
Total	1,298	2,763	3,341	4,661	4,427

TABLE (1.2)

AGRICULTURAL BANK LOANS

	Short-term		Medium-term	
	Number	Value (SR million)	Number	Value (SR million)
1400/01	9,310	39.2	35,818	2,491.6
1401/02	5,556	29.5	31,890	2,903.4
1402/03	3,454	25.3	35,432	4,140.8
1403/04	1,759	18.5	22,085	3,477.3

TABLE (1.3)

INCENTIVES FOR AGRICULTURAL PRODUCTION

Type	Amount	Source
Production input:		
Fertilizer	50% of cost	MOAW
Animal feed	50% of cost	SAAB
Potato seed	5 tons free; SR 1,000/ton thereafter up to 15 tons.	MOAW
Machinery and equipment:		
Poultry equipment	30% of cost	SAAB
Dairy equipment	30% of cost	SAAB
Engines and pumps	50% of cost	SAAB
Fish trawlers	Variable	SAAB
Transportation:		
Air transport of cows	100% of cost	SAAB
Output:		
Wheat	SR2.00/kg*	GSFMO
Rice	0.30/kg.	MOAW
Corn	0.25/kg.	MOAW
Millet/barley	0.15/kg.	MOAW
Dates	0.25/kg.	MOAW
Date palms planted	50.00/tree	MOAW
Agriculture credit:		
All types	Variable conditions	SAAB
Agro-industrial credit:		
All types	Variable conditions	SIDF
Land acquisition:		
Land distribution	Free	MOAW

* Purchase price for years 1405/06 to 1408/09; from 1399 to 1404 purchase price was SR3.50/kg.

increased their lending to agriculture significantly, and accounted for 21% of all agricultural loans in that year, in comparison to 13% in 1979-80. (8, 24, 27, 29).

3. The Real Estate Development Fund (REDF)

To encourage the private sector to build for residential and commercial purposes, the government established the REDF by a Royal Decree No. M/23 dated July 1, 1974. The Fund's regulations provide the following :

(a) Medium and long-term loans be granted to Saudi nationals in low and medium-income ranges for the purpose of home construction, up to 70% of the cost.

(b) To Saudi companies, the loans would be up to 50% of cost of constructing residential houses or hotels. The capital of the Fund which was initially fixed at SR:250 million, was raised to SR:2000 million in 1975. Loan callings were set for owner-occupied houses at SR:300,000 - and SR:10 million for buildings and housing compounds. In 1980, a repayment incentive scheme was introduced to encourage the prompt repayment of loans. A discount of 20% is allowed on timely payment with an additional 10% discount if repayment is made in one lump sum. During the period 1976-1979, total loans disbursements of REDF were SR:24.4 billion, making it the largest lender of the specialized credit

institutions in Saudi Arabia. (24,27,29)

4. The Saudi Industrial Development Fund (SIDF)

SIDF is one of the principal government agencies responsible for promoting the development of private industry. It provides interest free loans of up to 50% of capital to manufacturing and 100% to electric companies. A service charge of between 2 and 3 percent is levied on industrial loans to cover administration costs. The fund was established by a Royal decree in 1974 with the objective of supporting industrial development in the Kingdom through the provision of medium and long-term loans and advisory services. Since then, in response to the large and increasing demand for industrial loans, the Fund's capital has increased from SR:500 million to SR:5,000 million in 1980. In 1975, to facilitate the development of the electricity industry, the Fund was charged with the additional responsibility of financing private electric utility companies through the management of a special allocation of funds from the Government. (24,27,29)

5. The Saudi Credit Bank

The main objective for the creation of this bank is to grant interest free loans to low-income citizens. The loans granted are for specified social and economic purposes such as marriage, health, artisan workshops and home improvements. Although it was created in 1971, and its charter was approved on November

9th, the same year, it was not inaugurated until December 1, 1973. It extends loans not exceeding SR:5,000 to Saudis with low income. In 1975, 71% of the loans were financing marriages. (24,29).

6. Contractors and Bakeries Financing Program

It was the first funding facility established by MFNE in 1974 to meet a specific need within the economy. In 1975-76, there was an enormous demand for construction goods but finance for cement, building materials and steel was difficult to arrange. This program was induced to meet the credit requirements of registered Saudi contractors undertaking contract work. Loans were granted for between 50% and 60% of cost. Within the same overall scheme, and in response to a rising demand for bread, loan facilities are also available to encourage the construction of new automatic bakeries. For this purpose, capital assets of SR:100 million have been provided by the Ministry. Recently, a number of functions of this Fund have been taken over by other institutions, making its role less important than it previously had been. (24)

Table 1.4 shows the credit facilities given by both commercial banks and government lending institutions for the period 1983-84 and 1984-85. (30)

From this table, we can conclude that commercial bank loans are much more than those of the government lending institutions. Also, loans given by these lending institutions are mainly to private owners and some public agencies. None of them were made to

TABLE (1.4)

Commercial banks loans vs. Government development loans

	1983/1984	1984/1985
Agricultural Bank	3496	2322
Industrial Dev. Bank	5034	963
Real Estate Dev. Fund	8273	7800
Saudi Credit Bank	233	252
Public Investment Rund	8403	4194
Total Government Development Banks Loans	25439	15531
Total Commercial Banks Loans	57618	61640

contractors. Therefore, the commercial banks are considered one of the major sources of contractor financing.

1.4 Saudi Arabia and the Development Plans

Saudi Arabia has sixteen years of planning experience devoted to economic and social development. Throughout the past years, the government has been creating the foundation for self-sufficiency, sustained economic growth and reduction of its dependence on oil as the key source of national income.

The country's effort during the first and second five year plans (1970-75, and 1975-80) were concentrated on developing the basic infrastructure in which development of utilities, road networks, desalination plants, schools, housing schemes, hospitals, telecommunications, ports, airports, and industrial cities of Jubail and Yanbu were undertaken. Spending during the first five year development plan was SR:80 billion which increased to SR:700 billion during the second five year plan. (24,26,27)

The third five year plan (1980-85) pressed for the completion of infrastructural facilities, encouragement of the development and growth of the non-oil sectors and human resources while becoming conscious of the urgency of maintaining and operating the existing infrastructure already in place. The second half of the third five year plan was marked by the negative change in the international oil market resulting in an unexpected downturn in the Kingdom's revenues and consequently, a much lower level of government

spending and economic growth. The general economic environment, and particularly the construction environment, is becoming restrictive and more regulatory with increasing competition for a declining volume of government projects. Those contractors who are able to survive this economic change are and will be looking into future opportunities to diversify and find new sources of income. (24,26,27)

The announced fourth five year development plan (1985-90) is ambitious. The expenditure during this plan is summarized hereunder per segment in Table 1.5 (as directly or indirectly related to construction). (8,24)

The fourth five year development plan will have effect on both public and private sectors.

Effect on Public Sector

Near completion of infrastructure and declining oil revenues are resulting in a downward realignment of incomes in most segments of the business. The Government will enhance its future purchasing power by implementing stronger criteria of control, wider competition and a review of cost levels to adjust to current conditions. In spite of the declining revenues, the government intends to complete the remaining portion of infrastructure. (8,24,26)

Table 1.5

A. Water Development

Ministry of Agriculture and Water	SR: million
Water management	90.0
Water Resources Development	2260.2
Drinking Water Supply	6814.6
Operation and Maintenance	652.2
Sub-Total	9817.0
Saline Water Conversion Corporation	
Development and Construction	14156.2
Operation and Maintenance	5563.8
Administration	1216.2
Sub-Total	20936.2
Al-Hassa Irrigation and Drainage Authority	
Management, Operation and Maintenance	946.0
Research, Studies & Development of Water Resources	43.0
Construction	37.5
Manpower Development	10.0
Sub-Total	1036.5
TOTAL	**31789.7**

B. Energy	SR : Million
Ministry of Petroleum	
Seismic Survey	550
Management and Operation	418
Exploratory Drilling	330
Evaluation and Improvement of oil and gas facilities	122
Oil reservoirs study	108
Petroleum research/services development	91
Geological studies	73
Computer application	42
Construction	36
Gas conservation	33
Sub-Total	1,803
Petroleum	
Domestic Refineries	5,138
Distribution	3,777
Export refineries	2,377
Lubricants processing	1,085
Rabigh Infrastructure	2,839
Support facilities	890
Ancillary	58
General Administration	854
Sub-Total	17,018
TOTAL	18,821

C. Mineral Resources and Mining	SR Million
Deputy Ministry for Mineral Resources	
Management, administration and training	432.2
Geological Survey	189.5
Mineral Exploration	847.7
Mining Development	565.6
Geological Service to Community	70.6
Exploration Geochemistry, Geophysics and drilling	550.3
Logistic Support	242.2
Saudi-Sudanese Red Sea Joint Commission	187.1
Sub-Total	3590.8
Petromin	
Mineral Program	836.0
TOTAL	4426.8

D. Electricity	
Deputy Ministry for Electrical Affairs	
Generation	15,803
Transmission and Sub-Transmission	11,792
Distribution	11,076
Administration Development	3,260
TOTAL	41,931

E. Communication

Ministry of Communications (Roads)	SR: Million
Main Road Development	8,386.3
Secondary and feeder road development	2,013.0
Rural road development	2,397.4
Settlement of completed projects	1,917.0
O. & M.	2,849.8
Technical and Economic Studies	61.5
Sub-Total	19,284.1
Presidency of Civil Aviation	8,759.2
Saudi Ports Authority	6,413.8
Saudi Government Railroad Organization	1,126.8
Post and Telecommunications	
Postal Services	
O. & M.	3,100.0
Construction	39.0
Telecommunication Services	
O. & M.	17,782.0
Construction	136.0

F. Housing

	SR: Million
Deputy Ministry of Housing	
Management and Administration	190.0
O. & M.	238.0
Housing Construction	3,338.6
Pilgrim Facilities in Mina	61.4
TOTAL	3,828.0

Effect on Private Sector

Government's quality consciousness and reduced expenditure are pushing the private sector towards higher performance for lower prices. Average annual expenditure during the fourth plan is expected to decrease between 20 and 30 percent.

In the light of the political stability and continuity, the cyclic five year development plans are reliable sources and key indicators of the government's future development schemes. Oil sales will continue to be the principal source of revenue. In view of the unstable and fluctuating oil market, the government will be led to a choice of priorities in the implementation of the fourth five year plan. (8,24,26)

1.5 Construction Market Overview

The construction industry worldwide has always been a cyclic business with its ups and downs. In Saudi Arabia, the big construction boom of the late seventies and early eighties is over and is not likely to re-occur in the same dimension. During this boom period, the market was characterized by under capacity of contractors, high profitability and generous payment terms. Since 1982, the construction market experienced a rapid downward trend because mainly the Saudi economy entered a state of transition; fundamentally, it was changing from construction based growth to production based growth, as the major infrastructural development program came to an end. The market is now characterized by

intense competition, low margins and liquidity problems. But this market is bound level itself off in the coming two to three years to reach a stability point. In spite of the reduction in sizes, the construction market compared to many neighbouring countries remains of certain importance and has in the long run, several opportunities to offer. The nature of the projects will be different and more oriented towards operation and maintenance, high technology, mining, rural development and services. Diversification by Saudi contractors into these areas will lessen the impact of the decline in construction. In addition, the climatic conditions in the Kingdom require an earlier replacement of infrastructure than in less harsh climates, hence a substantial base of future work for contractors is expected to relate to the replacement of infrastructure. (24,26)

1.6 Previous Studies

A literature review, including an on-line computer search, was conducted. No citations concerning construction financing in Saudi Arabia were found; however, the following related citations were identified :

(1) Financing of Construction Projects in Developing Countries, P.G. Romiti, 1979.

This thesis concerns reviewing the available mechanisms for financing construction projects in less developed countries (LDC). The focus is on the financing of public construction projects in

LDCs and in some oil exporting countries which, although not fitting in the strict definition of LDC, play a great role in general demand for construction. After the discussion of the types of credit and the organizations which extend this credit, the processes of financing by lenders are described. It is shown that economically viable projects do not encounter great obstacles in receiving the most straightforward forms of financing. (23)

(2) Financing Operations of American Contractors in Developing Countries, J. Keselman, 1976.

This thesis explores the areas of contractor financing and the relationship between contractor and project financing, as they apply to U.S. firms working in LDCs. After presenting a financial background on LDCs and defining the extent of current involvement of American contractors in their construction market, the author discusses contractors financing needs and explores sources and methods of contractor financing. The relationship between contractor and project financing is illustrated with a description of a financing package and subsequent procurements on a representative construction project. (6)

(3) International Construction Financing, Demacopoulous, A.C., 1976.

This thesis examines the sources and methods of international construction project financing. Two distinct areas of financing are examined in this study. First, an overview of the sources and

methods of project financing, traditionally arranged by the owner, is provided. Second, the construction company's financing needs and risks coverage are examined. Then alternative sources of capital and innovative instruments and mechanisms are considered, in the light of the stagnation of international capital markets. Finally, the thesis considers financial management practices and strategies that can improve the short and long-term performance of international construction companies and their competitiveness in obtaining project financing. (3)

1.7 Methodology

a. Steps that have been taken in gathering the required information:

- A literature search and review was conducted.
- Meetings were held with five commercial banks (the main source of contractor financing in Saudi Arabia); Saudi American, Saudi-French, Saudi Investment, Saudi British and Saudi National Commercial, to develop background on the subject and to evaluate their contributions.
- Meetings were held with various contractors to take their responses about the subject. The researcher also used a questionnaire in collecting data from the contractors.

b. From the above steps, contractors' financial system was identified from both commercial banks and contractors themselves.

c. Two case studies are being presented to show how banks evaluate the contractors.

CHAPTER 2

CONTRACTOR'S FINANCING

The owner's capacity to finance a project determines his ability to meet his financial responsibilities to the contractor. However, no matter how efficient and reliable the owner in his finances, the contractor still has to face his own financing requirements, and problems, which are associated with doing construction business. (3)

In this chapter, the researcher will discuss bidding practices, type of contracts and cash flows of construction projects. Contractor's financing requirements and his association with commercial banks will also be discussed.

2.1 General Considerations

The management in the construction company is concerned with the efficient use of resources from five categories: money, labor, material, equipment and time. Particularly, the financial manager's job is to keep track of the financial performance and capital requirements of individual projects, as well as that of the company as a whole. The financial information should be used actively as a planning instrument before and during the

construction phase and not just as a historical accounting record after the project is over, or after failure and losses occur. The involvement of the financial manager starts from the very beginning of the project cycle, when the company has to make the bidding decision. Also, type of contract used and projected cash flow affect significantly the decision to bid and the financing requirements of the contract. (3)

2.1.1 Bidding and Contracting

The decision to bid is a major financial decision for two reasons. First, the contractor assumes substantial costs for the preparation of the estimates and the tender at the risk of not recovering them, in case he is not awarded the contract. Second, and most important, the contractor commits himself to the investment in and construction of the project, in case he wins the bid.

Bidding requires the preparation of accurate estimates. The accuracy of an estimate, in turn, is based on the ability to predict the future equipment, material and labor costs. The estimater has to use past experience, and also must be able to understand the potential problems that may arise and affect the costs. Material suppliers can assist the contractor in the estimating process by giving correct prices of materials meeting the specifications. After the cost estimate of the project is produced, it is usually the task of upper management to convert the estimate into a tender. The tender is a composite statement of the sum of money, time and other conditions required by the tenderer to carry out the project.

Contracts of various types are used in the construction business, covering the agreements between the parties involved in the different phases of a project. The owner, in particular, has a number of types of contracts to choose from for his contractual agreement with the contractor. One of the main reasons for contracts is to ensure that all costs are properly accounted so that the project can be built within the predicted outlay of money. Costs of construction projects are separated into two categories: direct costs and indirect costs. Direct costs include the costs incurred for a specific project that can be associated with a work item. Indirect costs include the operational overhead expenses of the firm which cannot be allocated to specific projects and the profit margin. If we call the direct costs 'cost', and the indirect costs 'fee', we define the cost plus fee contracts. If we add the cost and fee to give a single value (price), we have the fixed price contract. (3,4,25) These two types of contracts represent the two extremes in the contractual and financial relationship between the owner and the contractor. Other types of contracts may be produced by choosing characteristics from each of these two basic types. Cost-plus contracts have advantages and disadvantages. The advantages are low risk to contractor, easy to fast-track, easy to incorporate changes, owners often get better price for prototype work, easy to calculate progress payments, easy for contractor to obtain financing and lower estimating expense for contractor. The disadvantages are that it is more difficult for the owner to budget, requires owner to watch closely,

requires contractor to document carefully for reimbursement and often requires contractor to provide target cost. Fixed price contracts also have advantages and disadvantages. The advantages are that it allows one owner to budget better, allows contractor freedom to select subcontractors, relieves contractor from arbitrary documentation requirements by owner, allows contractor to share company resources to complete project, increases chances of bonus for early completion to the contractor and, the chief advantage is that the owners usually receive the lowest possible price because of competition. The disadvantages are that it is high risk for the contractor, it is often difficult to get reasonable bids or quotes on prototype work, it is difficult for the contractor to foresee escalation on long-term projects, owners often pay too much for changes, the time involved is considerably longer than in cost-plus contracts because plans and specifications have to be completed before the project can be advertised for bids, and finally the estimating expenses are higher for the contractor.

Types of Cost- plus Contracts are :

Cost-plus-percentage

The cost-plus-percentage contract is one where the contractor agrees to furnish a product and charge the owners all of the direct costs plus a stipulated percentage of the direct costs to cover the overhead and profit of the contractor. It is important in this type of contract to specify the items that are included in the direct costs and in the overhead and profit. It is also important

that a method be established for the owners to audit the contractor's expenses. The contractor should be required to establish proper accounting procedures. The cost plus percentage contract encourages the contractor to use the most expensive materials and methods of installation - the greater the cost, the more money the contractor makes. For this reason, the owners get the very best of materials and the most expensive workmanship. In this type of contract, the owners are in full control so that they can make changes according to their requirements. These changes are accepted by the contractor because the contractor makes money on additions and does not lose profit percentage on reductions, though the anticipated amount of profit is less. The main disadvantage of this type of contract is the excessive cost. For this reason, few cost-plus-percentage contracts are awarded. (3,4,15,25)

Cost-plus-fixed-fee.

The cost-plus-fixed-fee contract is the same as a cost-plus-percentage contract except that the consideration for the contractor consists of an agreed upon fixed sum of money rather than a percentage of the cost. This means that the fee for the contractor will remain the same even though the final cost of the project is twice or half the estimated cost. In this type of contract, the plans have to be under way so the contractor has some idea of the amount of work required to enable him to establish a fee, but the contractor does not have to have completed plans. The cost in

this type of contract should be lower than those in the cost-plus-percentage contract. Because of this, the contractor will try to hurry the job. The sooner he finishes, the more money he makes. (3,4,15,25)

Cost-plus-fixed-fee-with-guaranteed-maximum

In this type of contract, the contractor agrees to build a structure on a cost-plus-fixed-fee basis, and also agrees that the structure will not cost more than a specified amount of money. In this respect, this type of contract is similar to the fixed-price contracts, the fact that the owner is obliged to pay only a specific sum of money is the chief advantage of this type of contract. The owner has the privilege of making major changes in the plans, excluding those that would bring the cost of the project above the amount agreed upon. In this type of contracts, the plans must be almost finished. (3,4,15,25)

Cost-plus-percentage-with-maximum-price

The cost-plus-percentage-with-maximum-price contract is similar to the cost-plus-fixed-fee-with-guaranteed-maximum. The difference is that the contractor is paid a percentage of the cost of the structure rather than a fixed fee. As the owner is protected by the maximum price and as a fixed fee is usually determined by the maximum cost, the owner may save money if the cost is less than the maximum, but it does, however, give the contractor an

inducement to calculate the costs as close as possible to the maximum; and this could be to the owner's disadvantage. (3,4,15,25)

Cost-plus-incentive-fee

To provide the contractor with an incentive to keep the cost of the work and time of construction to a minimum, various bonus and penalty provisions can be applied to the determination of the fee. Under a cost-plus-incentive-fee contract, the contractor and owner agree on a target cost of construction. Bonus or penalty arrangements are tied to this target figure. Hence, this type of cost-plus contracts, must of necessity, be applied to work of fairly definite nature for which drawings and specifications are sufficiently developed to enable a reasonably accurate target cost to be determined. As an incentive for the contracting firm to minimize costs, a bonus clause can be written according to which it shall receive, in addition to a base fee, a stated percentage of the amount by which the total actual cost in less than the target estimate. It means that the owner and contractor will share the savings. There may also be a provision whereby the contractor's fee is reduced if the construction cost exceeds the target estimate. (3,4,15,25).

Types of Fixed-price contracts are:

Lump-sum

The lump-sum contract states that for a specific sum of money, the bidder will agree to do a specific amount of work. The

satisfactory completion of the work for the stated amount remains the obligation of a contractor, regardless of the difficulties and troubles that may be experienced in the course of construction activities, even though the total cost of the work may turn out to be greater than the contract price. However, the contractor may be relieved of this contractual responsibility of performance, when there is contract provision for price adjustment, in the event of changed conditions. The chief advantage of a fixed price contract is that the owner receives the lowest possible price because of competition. Another advantage to the owner is that the time involved is usually stipulated and the owner knows in advance exactly what he is buying, the amount he is paying, and when he will get it. The owners carry very little risk because they know the total extent of their financial commitment. For these reasons, this is the most common type of contract despite its disadvantages, which include delay in the start of construction work, difficulty in the implementation of changes and the absence of the contractor in the design phase. Also, the quality of work may be poor because price alone determines who is awarded the contract and the contractor may have to cut corners to be the low bidder. A contractor cannot afford to furnish a product above the minimum specified. (4,15,25)

Fixed-price-with-escalation

This type of contract is similar to the lump-sum contract, but with the addition of an escalation of the cost clause. This

means, for example, if the cost of materials goes up, the contractor has the right to adjust the contract price accordingly. For this reason, this type of contract is very good for long term projects where contractors cannot forecast what costs will be in the future. (4,15,25)

Fixed-price-with-value-engineering

This type of contract is similar to the lump-sum contract but includes a 'value engineering' incentive clause. In this context, value engineering applies after the contract is awarded and is concerned with the elimination or modification of any contract provision that adds cost to a project. The basic objective of value engineering is often stated to be the elimination of 'gold plating'. A clause of this type provides an opportunity for the contractor to suggest changes in the plans or specifications and to share in the resulting savings. These changes may involve substitutions of materials, modifications of design, reduction in quantities, or procedures other than those set forth and required by the contract documents. Value engineering is designed, not to enable the contractor to second guess the designer, but to take advantage of the contractor's special knowledge and to cut the cost of a project to the lowest practicable level without compromising its function or sacrificing quality or reliability. In short, the contractor is encouraged to develop and submit to the owner cost-reducing proposals leading to changes in the plans or specifications. If the owner accepts them, a change order is processed and the savings

are usually shared. (25) This type of contractual procedure is currently in use in the Ministry of Defence and Aviation (MODA) in the Kingdom of Saudi Arabia.

Unit-price

In this type of contract, the contractor quotes the prices by units of items rather than giving a single total contract price, and the low bidder is determined by the total cost of all items based on assumed quantities provided by the designer. It is used whenever the exact amount of work cannot be estimated, primarily in projects with a lot of earthwork and foundation work like highways and dams. Its main advantage for the contractor is the feasibility, within certain limits, in making changes in the amount of work at the quoted unit prices. It allows the owner to receive competitive prices from several contractors when the extent of the work is unknown. It also allows the owner the freedom to make changes in the volume of work required while the job progresses without changing the contract. In addition, it permits the owner to control the amount of money that will be spent. The owner knows the cost of any specified work in advance and can stop work at any stage. Since the contractor will get paid on actual quantities of items of work, the cost of inspection is greatly increased with this type of contract. The owner is required to check the contractor's delivery of materials and take measurements. The measurements must be accurate, as they determine the actual cost. The risks are fairly distributed between the owner and the contractor and

their primary concern is the degree of accuracy of the assumed quantities which are usually estimated by the designer. (3,4,15,25)

The above listed types of contracts are the ones most commonly used in practice. The lump-sum and unit-price contracts are used mostly in competitive bidding while the rest fall in the category of negotiated contracts. Competitive bidding is the most common method for choosing among interested contractors, particularly for public projects. Competitive bidding is practised widely, not only because in some cases it is required by banks for the projects which they finance, but also because it enables the owner to choose the lowest responsible bidder. The contractor is considered 'responsible' after examination of his technical competence and experience, and his current overall financial position. In some cases, the owner decides to pre-qualify all bidders on the basis of documents establishing the firm's expertise and capacities. Pre-qualification is useful for the owner because he is not pressed to accept a low bid from an unreliable contractor. It is also good for the contractor because he will not spend time and money for preparation of the bid unless he qualifies.

Bidding and Contracting in Saudi Arabia

In Saudi Arabia, most of the works contracted by the Saudi Government are fixed-price contracts. There have been some cost-plus projects done but these are very rare. Rarely these contracts are awarded on a negotiated basis (essentially for the

Ministry of Defense and Civil Aviation Projects granted to contractors with a long track record in Saudi Arabia and with this Ministry). Some high-urgency projects are also let on a negotiated basis. (26)

The Saudi Arabian Government has become quite experienced in dealing with local and foreign contractors. The pre-qualification list of data used by the government gives some idea how sophisticated it has become. Most of the questions asked relate to the company's track record over the past few years, personal histories for employees in key positions in the company, how much they normally subcontract, amount of net worth and working capital of the firm, and construction equipment owned and/or rented. They also ask for the performance record for the last 10 years and considerable detail as to bidding performance and penalties. Also, contractors have to submit with their tender income tax/zakat certificate, chamber of commerce and industry membership certificate, specification certificate and a certificate from a bank showing the contractor's financial strength and reputation. Also, most important is the attachment of a bid bond with the submitted tender. A normal number of bidders on a contract is 10 to 15; however, on smaller contracts (SR:30-60 million), there may be up to 100 bidders. The invitation to bid is done in two ways. For open bidding, the invitation will be advertised, twice at minimum, in an official newspaper (Um-Alquara). The second way is by inviting certain contractors personally for special projects through official letters. Sealed bids are opened on a prescribed day and evaluated by the appointed consulting engineers and government officials.

Ultimately, the government decides who wins the bid. Project specifications are most important, however, if a Saudi company generally meets the specifications, it will be given preference over a foreign bidder. In highly technical contracts, where a great deal of foreign supplied materials are required, the number of bidders is kept low and pre-qualification criteria are ignored in favour of selection of a few well-known or proven suppliers and installers (10,26). A good example of this would be the Saudi Telephone system which went to bid in the mid-70s and was only finally awarded in 1977 to L.M. Ericsson, Philips, and Bell Canada. There were only two other bidders considered under the standards set by the Ministry. (26)

Since most of the contractors in Saudi Arabia are foreign contractors or in the form of a joint-venture, the Saudi government wanted to encourage the participation of Saudi nationals in the commercial development and industrialization of the Kingdom. On 14th March, 1983, cabinet decree No. 124 was issued. This decree covers the 30% rule, which implies that a foreign contractor and a joint-venture contractor (a Saudi-foreign contractor) should sub-contract 30% of their contracts to 'Saudi' contractors. A Saudi contractor is a Saudi individual or 100% Saudi company registered in Saudi Arabia. Thus, even a mixed Saudi-foreign limited liability company in which Saudis hold the majority shares, is not 100% Saudi and must conform to the requirement as if it were foreign. Worse, the regulations specify that a contract being performed as a joint venture, say 50% foreign and 50% Saudi, will not get credit under the decree for the Saudi portion of the joint venture.

Rather, the joint venture will be viewed as non-Saudi and will have to subcontract 30% of the project to a wholly Saudi entity. This decree applies to all public works contracts for construction and operation and maintenance. The regulations give the decree real teeth by requiring a contractor to provide full details of the intended 30% Saudi participation. The contractor must submit the information at the time of tender or the time of contract. Advance payment on the contract depends on compliance with the decree. While the contractor is free to perform the contract and fulfill the requirements at or near the end of performance, the governmental employer must withhold 50% of the billings - an action few contractors could survive. In a new development for Saudi Arabia, the regulations require supervising agencies to report on the work done by the Saudis involved in the project. Perhaps, the only major concern is that the regulations do not recognize the Saudi content in a joint-venture or even majority participation in a limited liability company. Stringent enforcement of the decree will further encourage contract flipping. Under this trick, a 100% Saudi entity bids on a project after buying the bid of a 100% foreign company. The winning Saudi contractor then signs a private agreement with the foreign firm, which in turn will perform all of the work for 95% of the price. Obviously, such flipping contravenes the policy behind the decree. On the other hand, there are few qualified Saudi contractors. Because of this, in November 1985, the 30% companies with over 51% Saudi ownership are not obliged to subcontract 30% of government contracts to 100% Saudi companies. At the same time, the amendment has clarified that such

joint ventures do not themselves constitute Saudi companies and, therefore, cannot bid for subcontracting work under the 30% clause. (20,26,32).

2.1.2 Cash Flow

Introduction

Every business must pay strict attention to its planning and control of cash. This is especially true with regard to construction firms. The rate of bankruptcy of construction firms is one of the highest in the world. The construction firm's failure to plan and control its cash is high on the list of reasons for construction firm bankruptcies. Many construction firms boast of increased volume of work. They often equate growth in sales volume with the success of their firm. But many of thes so called successful construction firms are becoming insolvent because they do not have enough cash to meet the needs of their current volume, yet alone increased volume. One also hears of construction firms making money while going broke. This often refers to the firm's performing work at a profit while failing to collect cash. Profits in the form of receivables, depreciation, and excess billings do not help the firm pay its bills. The common habit of rolling over the receivables and other non-cash revenue from one construction project to the next eventually spells trouble at the first slowdown in volume. (13)

A cash flow for a construction firm gives a charting of the cash inflows (cash receipts) and cash outflows (cash disburse-

ments) along a specific span of time. Cash flows can be done for each project and for a firm's total operations. Charting cash flows for a firm's total operations is commonly referred to as a cash budget. The cash budget can be used to analyze cash needs on a short-term or long-term basis. The charting of cash flows for a project establishes cash overdrafts or surpluses for a specific project. (12,13,31)

Preparing cash flows are merely an attempt to predict the flows into and out of cash during some future span of time. So, it will help in determining how much cash will be needed, when money must be borrowed, how much will have to be borrowed, how the chances of borrowing needed funds can be improved, and how the need to borrow may be reduced through more efficient operations. It also serves as an aid in planning. Specifically, the cash budget can be used to establish expectations for a future period. These expectations become the construction firm's plan for the future. In this sense, the cash budget can serve as a motivating force for total company operations.

Banks sometimes require these cash flows from contractors when they apply for credit facilities because they need to be sure that the amount of loans applied for by contractors do not exceed their projected capacities. Also, if the contractor prepares his own cash flow and gives it to his banker, it will demonstrate that he is aware of his future needs - a fact which will impress the banker. The loans needed to carry the firm through periods of cash deficiency are much more likely to be approved when they are

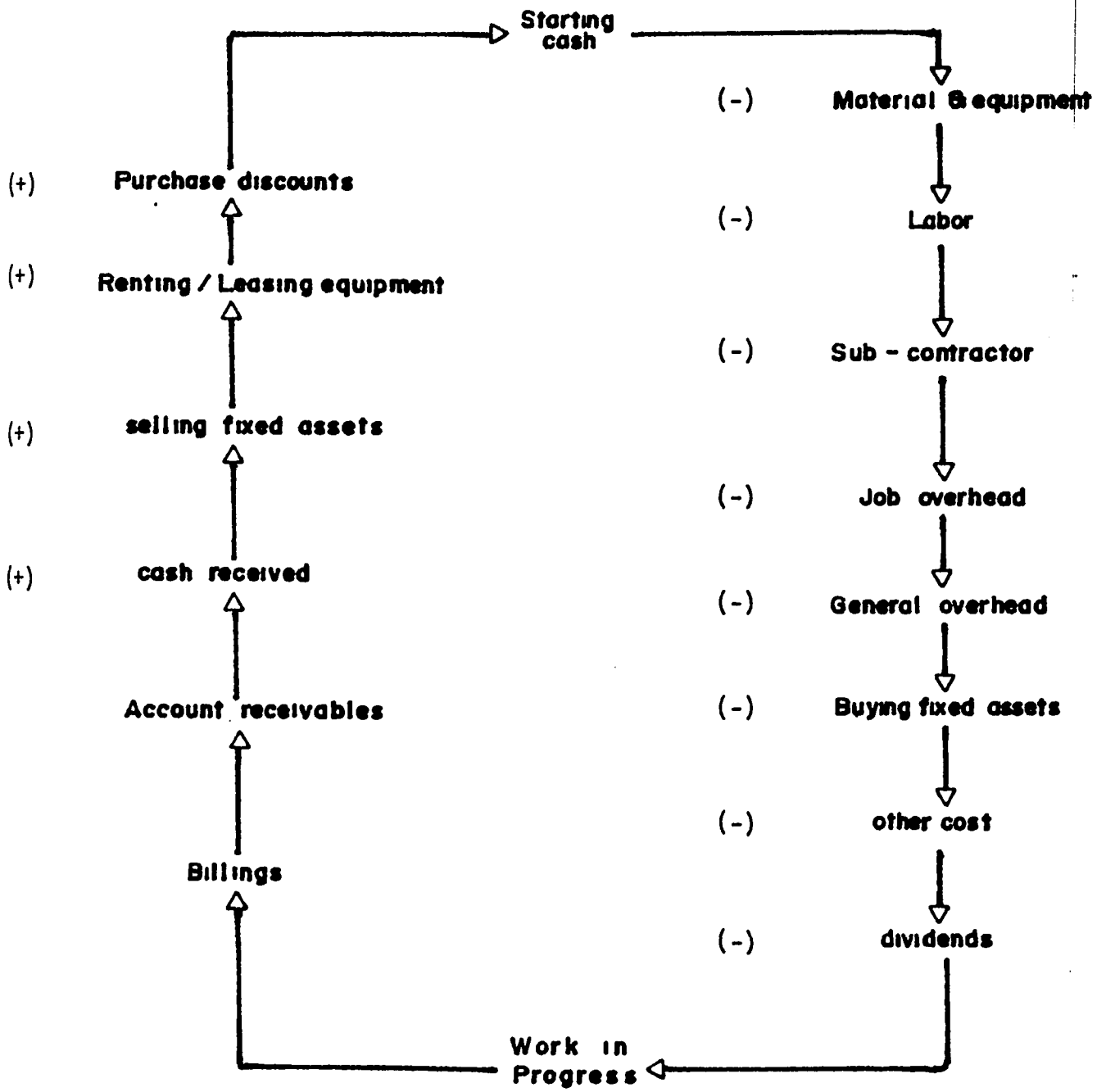
based on forethought and planning than when they are expressed after the fact. (12) In the following sections, the researcher will discuss the cash cycle, analysis of the cash flow, managing a cash flow and finally, actual examples of construction firm's cash flows in Saudi Arabia will be presented. (12)

The Cash Cycle

The construction firm is subject to a continual cycle of events that may increase or decrease its cash balance. Knowledge of these events and the impact of each on the firm's available cash, is the first step on the road to managing cash. The diagram in Fig. 2.1 illustrates the cycle cash takes through the construction firm. The cycle starts when the firm's cash is decreased in the acquisition of materials, equipment and required services to build a construction project. Cash is further reduced in paying off accounts payables to vendors. Also, the cash is further reduced through paying off laborers, subcontractors and other related costs (job and general overhead). Then as the construction firm builds a project, it typically makes interim billings to its customer for work performed. These billings become receivables. When the customer pays, accounts receivable is reduced and the cash account increased. However, cash inflows from customers may be received subsequent to the construction firm's payment of its bills to vendors and the payment of its labor payroll. This, of course, is the cash management problem confronting the construction firm. (13)

Fig (2.1)

CASH FLOW CYCLE



In addition, other less frequent events can significantly add to or subtract from the cash balance. Purchasing real estate and construction equipment can adversely affect a firm's cash position. Unfavourable legal settlement, distributions of dividends and expenditures for new developments like purchasing a computer all may weaken a firm's cash position on a short-term or long-term basis. Usual events may also lead to an increase in the construction firm's cash balance. Selling fixed assets such as some of the firm's equipment fleet, renting or leasing can all lead to an increase in the construction firm's cash balance. Also, taking advantage of purchase discounts improves the cash position.

Cash Flow Analysis

Cash flows for construction projects, regardless of their type and particulars, are characterized by similar patterns of cash inflows (earnings or receipts) and cash outflows (disbursements). A summary of cash flows with appropriate timing of each in the construction cycle is shown in Fig. 2.2. Possible advance payments, progress payments and payout of retention are examples of cash inflows during construction cycle. Pre-bid expenses, mobilization expenses, bonds expenses, payments to suppliers and subcontractors, payrolls, payout of retention by the contractor to subcontractor and periodic expenditures are examples of cash outflows during project execution. To analyze these flows, each flow should be studied separately to see how it affects the net cash flow position of the contractor and his lines of credit. The net

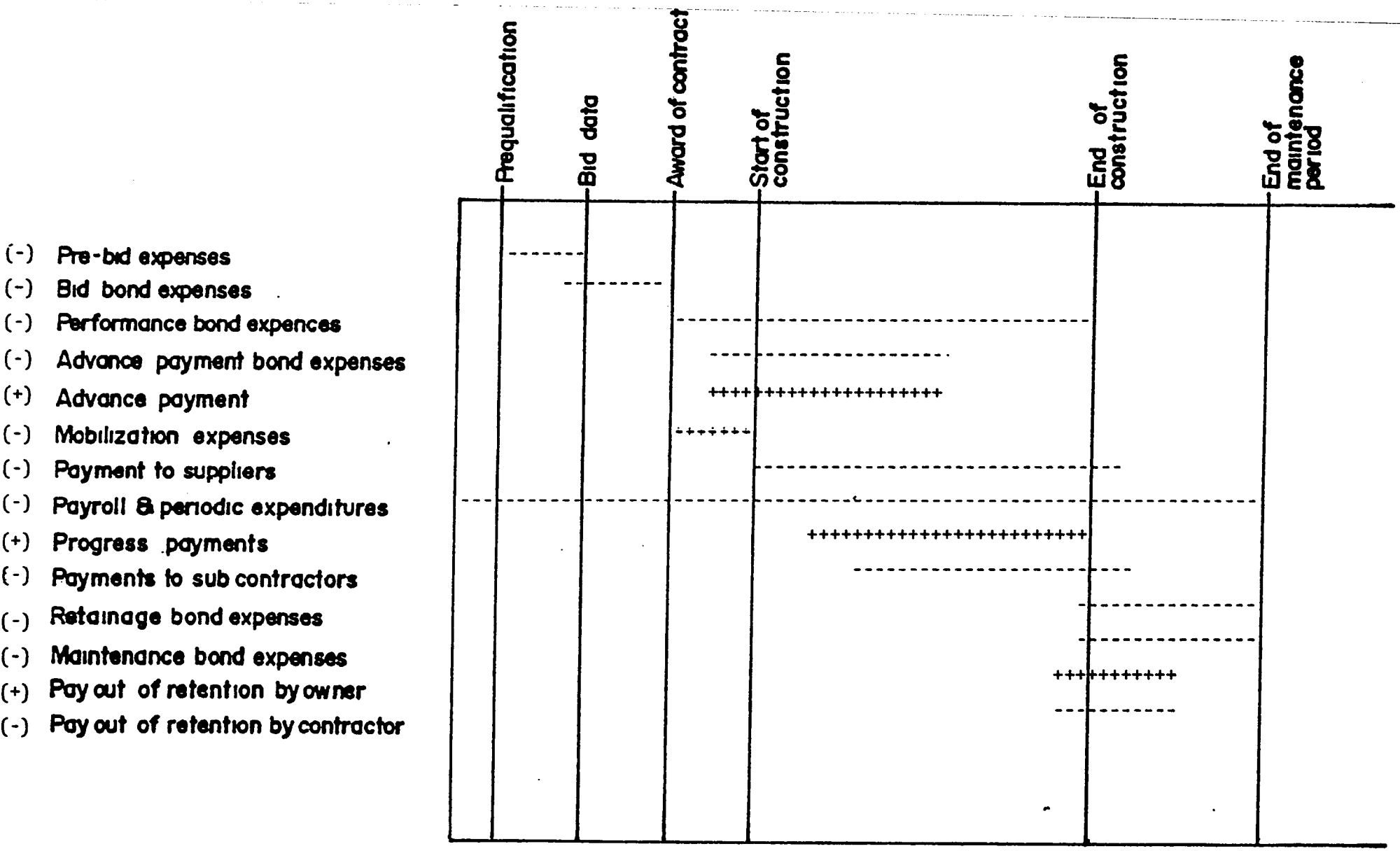


Fig (2.2)

CASH FLOW TIMIG FOR CONSTRUTION PROJECTS

cash flow position at any point along the project time axis is the difference between cumulative cash inflows and the cumulative cash outflows paid out to date. A positive net cash flow means that the contractor has received more money than he has paid out. A negative net cash flow means that he has paid out more money than he has received, and implies that the contractor somehow financed the difference, either with internal company funds or with outside company funds (borrowed funds). In the following sections, the researcher will discuss the constituents of cash flow (inflows and outflows). (3,16,23)

Cash Flows (Disbursement and Receipts)

Pre-bid Expenses

This category includes costs associated with preparation of the bid, such as contract documents costs, estimating costs and general costs (site visits, site inspection, etc.). The preparation of cost estimates and tenders requires many man-hours of study and gathering of information from a number of sources. Visiting sites, testing and inspecting these sites (to see if it contains a high water table level, or rocks or other increased cost items that might not be mentioned in the contract documents). Also, meetings with the owners and contacts with banks and other agencies are costly project related activities. These costs, along with bid bond expenses, make up the investment (and financial commitment) required of the contractor just to be in contention for award of the contract. Pre-bid expense becomes part of the project cost if the

bid is successful and an expense of doing business (general overhead) if it is not. (3,15,16)

Mobilization Expenses and Advance Payment

With the award of the contract, posting of a performance bond, and upon completion of any subsequent negotiations with the owner, the contractor is ready to start the mobilization process. This includes the assembling of construction equipment and the labor force, providing housing for workers, setting up of local site offices and maintenance facilities, purchasing of materials, equipment and spares, and arranging subcontracts. The pressure is then on the company to generate working capital from its own resources or from other parties such as banks to meet these needs.

Fortunately, owner's (ministries and agencies) recognizing this need will often give an advance payment to help the contractor and to attract his services. The advance payment is a percentage of the contract value. This percentage varies for different projects and different countries. Saudi Arabia recently reduces its 20% advance payments to the 10% level. This reduction truly added financial stress to many construction firms, particularly small contractors, but the researcher thinks that this act should be considered as moving back to normal because today the international norm is 10%. At some point in the project, the owner will start to deduct a percentage from each billing submitted to him by the contractor to cover the advance payment, usually this percentage is

the same as the advance payment percentage. (26) An advance payment is a very desirable thing to have from the contractor's point of view, for several reasons. First of all, as was explained above, he needs a substantial amount of cash up front and if that cash is provided by the owner, so much the better, the contractor's own financial commitment is then reduced, along with his front-end financing costs. Furthermore, in an effort to protect himself against rising costs and currency fluctuations, the contractor wants to "buy out the job" (or as much of it as he can) at the earliest possible time, so he can use the advance payment to purchase materials, equipment and subcontracts. In addition, any unused part of the advance payment can be invested in short term investment instruments. (3,16) Advance payments are not given indiscriminately; the owners usually and the contractors for bank guarantees (bonds) against them, these bonds are called advance payment bonds.

Note: All bonds will be discussed later in Section 2.3.1.2.

Progress Payments

As the work progresses, the contractor is reimbursed on a periodic basis, in accordance with the contractual agreement. In turn, the contractor has to pay his subcontractors, labor force, suppliers of materials and, in general, meet all of his own financial commitments. Usually, the contractor bills the owner on a monthly basis for work completed during the preceding month that has been approved by the owner's architect or engineer. Depending on how the owner pays the monthly billings, the contractor might have to

finance a month or more of his own project expenses. The advance payment will lower this burden and that is another reason why it is so important to the &contractor. (3,15,25)

The methodology of estimating these progress payments varies depending on the type of contract used for the project. If the contract has been awarded on a lump sum basis, the contractor and the owner's engineer need not go into detailed calculation of the volume of work done, but rather try to, as accurately as possible, agree on an estimate of the percentage of work completed during the month and derive the progress payment from this estimated percentage. If the contract is awarded on a unit price or cost plus basis, the amount of work done has to be measured in detail according to the methods of measurement described in the contract. It is essential to both the owner and the contractor that the valuation be as accurate as possible. If the works are overvalued, the owner is in danger of losing the over-value in case the contractor defaults and in the absence of sufficient bonding. Similarly, if the works are undervalued, the strain on the contractor's working capital reserves may reduce the progress of the work as well as endanger the contractor's overall financial position. (3,16)

The owner's monthly payment to the contractor is for one hundred percent of the completed work, less the retainage he is charged (typically around ten percent), and less a deduction to cover any advance payments. Retainage, usually paid out at the end of the maintenance period, is widely used as another way of insuring quality of work from the contractor. It is often avoided

through a retention bond issued by the contractor's bank. Often, the owner will also as a matter of policy, not pay for materials which were delivered to the site but which have not yet been incorporated into the work.

The other important consideration in determining the working capital financing needs during the construction phase is the size and timing of contractor's disbursements to his own work-force, his suppliers and subcontractors. With respect to subcontractors and suppliers, the contractor will generally try not to 'carry' them, that is, he will not pay them before he receives the progress payment himself. This means passing on the owner's payment policies to the subcontractors, and taking advantage of supplier credits (that is buying on 30 or 60 day credit terms) when procuring materials and equipment for the project. Disbursements for payroll as well as other periodic expenses (field service, insurance, etc.) of course cannot be delayed in this manner. (3,4,15,25).

In Saudi Arabia, under the terms of most contracts, progress payments are made in the following manner. At the end of the Arabic month, the contractor draws up his total work completion report and submits it to the consulting engineer. The consulting engineer will deduct from the total completion report all previously paid work and will draw up a certificate of completion for that work completed over the previous 28 to 30 days and then, if satisfied, submit it to the Ministry for processing payment. The Ministry has its own bureaucracy which processes the certificates.

The certificates may require as many as 15 or 20 approvals prior to the final request that a check be drawn by the Saudi Arabian Monetary Authority with the approval of the Ministry of Finance, payable to the contractor. This process can take as little as 10 days and as long as 120 days. The check is payable net of the 10 percent (which is retained as a guarantee for completion and performance), installment on the advance payment (usually a 10 percent deduction), delay penalties, and other miscellaneous deductions. Officially, ministries can no longer deduct retention from progress payments to contractors pending satisfactory completion of a project and final client acceptance; they may withhold only the final payment (this circular was announced in November 1985, by the Ministry of Finance and National Economy). The new retention policy implies that contractors must get paid in full for their progress payments without any retainage, until the total amount of received progress payments reaches 90% of the contract price. After which the contractors will not get paid and the remaining 10% will be held as retainage. Aramco (Arabian American Oil Company) does deduct 10% of each billings as retainage. (20,26,32).

Nearly all contractors in Saudi Arabia are payable in local currency. There is a Royal decree, however, which provides that foreign contractors with contracts exceeding SR:300 million must be paid in US dollars. Saudi contractors have the option to receive Saudi Riyals. Payment in Saudi Riyals creates additional risks for the contractor since he is put in a position of hedging or taking a foreign exchange risk for a portion of his receivables over a contract period that may be as long as two to four years. A bank's

hedging services have become more and more interesting to contractors as the value of the Saudi Riyals versus European currencies and the US dollar has fluctuated considerably since late 1978. Late progress payments by the ministries are a perennial problem. In 1978 and 1979, for example, there was a backlog of late payments by certain ministries. Payment delays again developed prior to the budget year in mid-1980. However, no ministry could truly default on a payment. Contracts are awarded based upon budgeting allowance but drawings may occasionally exceed budgets temporarily. In other words, a contractor or bank could be having trouble collecting from the Ministry of Agriculture, but the real claim is on the Ministry of Finance which controls large foreign exchange reserves in addition to controlling the local currency money supply.

Recently, many contractor claims concern the delay in payment by ministries. Also, there are signs of escalation in the running battle over payments between construction companies, particularly foreign ones, and the government. In January 1986, a Committee of Ministers was set up to investigate claims of late government payments and it found no evidence of government wrongdoing. It said that all delays were attributed to non-compliance with contractual obligations. The Committee went on to suggest that the plaintiff companies were using delayed payments as an excuse to their banks or shareholders. It declared that, in the future, companies found to be deliberately disseminating false information could be banned from working in the Kingdom. (20,26,32)

Final Payment

In most construction projects, there are two acceptance dates. Initial and final acceptance. Between these two dates is the maintenance or warranty period. The contractor is responsible for the works executed by him and he is required, on notice, to make good at its own expense defects detected during this period. The contractor is responsible only for improper workmanship, inferior materials, or other faults resulting from its failure to perform in accordance with the contract. This period is mostly one year in Saudi Arabia. The final payment is made to the contractor after the initial acceptance and the issuing of the certificate of substantial completion. But the contractor, will not receive his final payment until he submits to the owner the zakat/income tax certificate, GOSI (General Organization for Social Insurance) Certificate, a certificate from labor and work office that the contractor has paid all of his employees and a visa clearance certificate. Final payment includes last progress payment and any payments withheld from the contractor in previous progress payments. (3,16,25,26)

Managing Cash Flow

A typical pattern of cash inflow (receipts) and cash outflow (payments) of a project is shown in Fig. 2.3. The difference between the cumulative inflows and the cumulative outflows at any point of time represents the overdraft or surplus of cash from the project. An overdraft represents the amount of cash the construction firm will have to have available from its own funds or borrowed funds in order to perform the project as scheduled. To minimize this overdraft, the contractor needs to move the cumulative receipts curve to the left and up as far as possible. At the same time, try to move the cumulative disbursement curve to the right and down as much as possible. This is what is called effective cash flow management.

Billing the owner as much and early as possible, and receiving the earnings as soon as possible will move the cumulative receipts curve to the left. Also, reducing the amount of retainage percentages will move the cumulative receipts curve up. Taking advantage of the supplier credits (that is buying on 30 to 60 day credit terms) when procuring materials and equipment for the project, increasing the lag on payments to subcontractors and suppliers, increasing the retainage charged to subcontractors and taking advantage of discounts when purchasing the project procurements (i.e. a "2/10 net 30" means the construction firm can receive a 2 percent discount if it pays the invoice within ten days). All will move the cumulative disbursement curve to the right and lowers it. If the contractor has an advance payment the overdraft amount will be minimized as shown in Fig. 2.4. (3,16)

Fig (2.3)

A TYPICAL PATTERN OF CASH FLOW WITHOUT ADVANCE PAYMENT TERMS

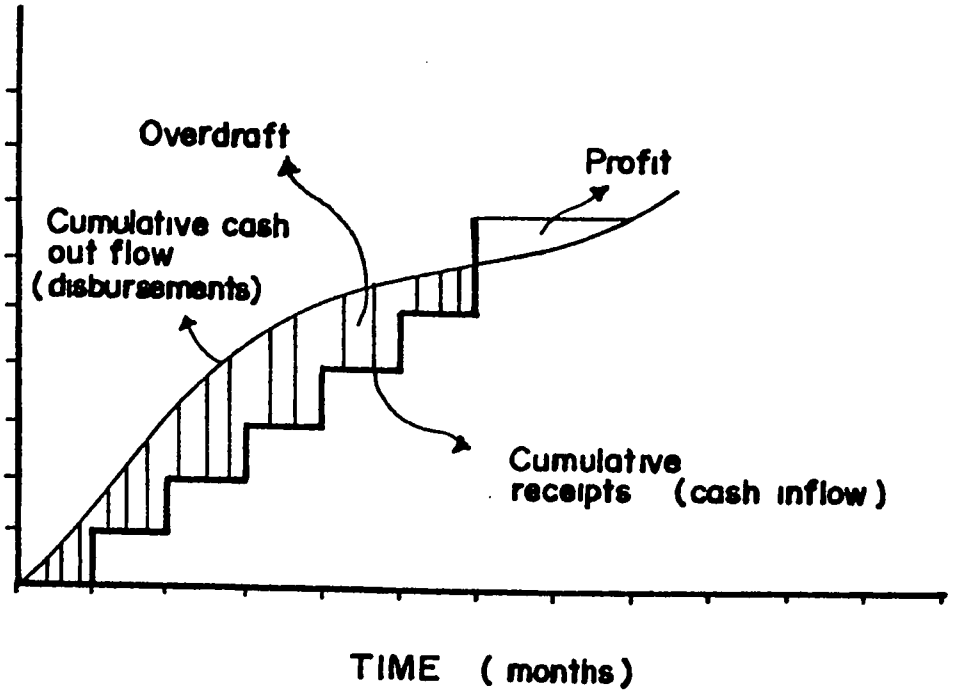
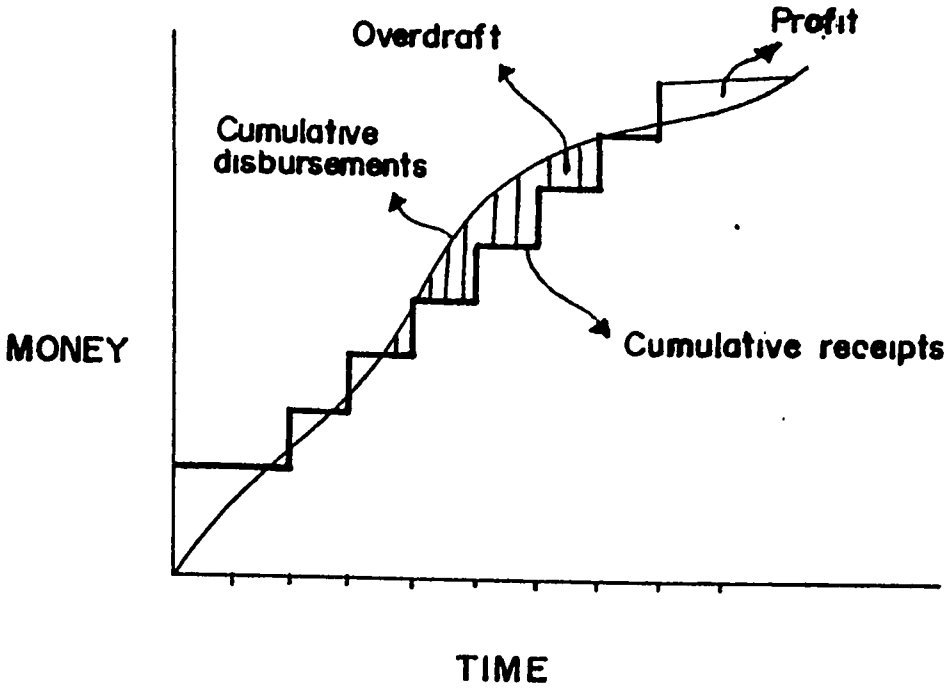


Fig (2.4)

ATYPICAL PATTERN OF CASH FLOW WITH ADVANCE PAYMENT TERMS



Another important method at the contractor's disposal under a unit-price contract is 'front-end-loading'. This term refers to assigning a greater percentage of profit to early portions of project work, rather than spreading profits in proportion to cost over the project's duration. It serves the purpose of helping to reimburse the contractor for the initial costs of moving in, setting up and commencing operations, for which a specific pay item is seldom provided. Such moderate unbalancing of bids assists the contractor financially and minimizes the initial investment to the owner's project.

Examples of actual cash flows of construction projects in Saudi Arabia

In this section, the researcher will present three different cash flows of three different contractors for different projects that are done in Saudi Arabia.

Cash Flow No. 1

Table 2.1 shows the cash flow projection for one of the buildings of King Abdulaziz University at Jeddah. The timing of this cash flow is divided into quarters, starting at the third quarter of 1985 and ending the third quarter of 1987. This cash flow includes the following divisions :

table (2.1)

CASH FLOW PROJECTION # 1

	1985		1986				1987			
	3/4	4/4	1/4	2/4	3/4	4/4	1/4	2/4	3/4	TOTAL
1. BEGINNING CASH BALANCE		-8,251	-13,368	-12,197	-11,021	-7,213	-2,137	122	2,020	
2. SOURCE OF FUNDS	4,591	2,296	7,132	7,805	9,723	11,477	4,886	2,591	4,591	55,092
- PROGRESS PAYMENT		2,296	7,132	7,805	9,723	11,477	4,886	2,591		45,910
- ADVANCE PAYMENT	4,591									4,591
- RELEASE OF RETENTION MONEY									4,591	4,591
3. APPLICATION OF FUNDS	12,842	7,413	5,961	6,629	5,915	6,401	2,627	693		48,481
- REFUND OF ADVANCE PAYMENT		230	713	780	872	1,248	489	259		4,591
- RETENTION		230	713	780	872	1,248	489	259		4,591
- OVERSEAS CONSTRUCTION COST	12,044	5,860	3,252	3,620	2,993	2,720	847	103		31,439
(Material)	(7,860)	(3,682)	(1,457)	(2,076)	(1,774)	(1,627)	(233)	(10)		18,719
(LABOUR)	(412)	(568)	(572)	(584)	(589)	(569)	(352)	(83)		3,729
(EQUIPMENT)	(3,574)	(1,298)	(861)	(528)	(302)	(261)	(68)			6,892
(G. A. EXPENSES)	(198)	(312)	(362)	(432)	(328)	(263)	(194)	(10)		2,099
- DOMESTIC EXPENSES	798	1,093	1,283	1,449	1,178	1,185	802	72		7,860
4. ENDING CASH BALANCE	-8,251	-13,368	-12,197	-11,021	-7,213	-2,137	122	2,020	6,611	6,611
5. Bank TERM LOAN	11,000									
6. REVISED ENDING CASH BALANCE	2,749	(2,368)	(1,197)	(21)	3,787	8,863	11,122	13,020	17,611	

1. The beginning cash balance of the project.

2. Source of funds; this division includes subdivisions (a) progress payment, (b) advance payment, and (c) release of retention money.

3. Application of funds; this division includes refund of advance payment, retention, overseas construction costs (material, labor, equipment and general administration expenses) and domestic expenses.

4. Ending cash balance which is the output (summation) of the above divisions.

5. The needed term loan.

6. The revised ending cash balance.

The Analysis of Cash Flow No. 1

As shown in Table 2.1, in the third quarter of 1985 (which is considered the first quarter in the execution of the project) the beginning cash balance is zero because the project is just started. Source of funds in this quarter is the advance payment which is SR:4,591,000. Application of funds is SR:12,842,000 which covers the following: SR:7,860,000 as material expenses, SR:412,000 as labor expenses, SR:3,574,000 as equipment expenses, SR:198,000 as general administration expenses and SR:798,000 as domestic expenses. The ending cash balance of this quarter is

(SR:12,842,000-SR:4,591,000 = -SR:8,251,000) which means that the contractor will be in need of SR:8,251,000 at the end of this quarter. Thus, this figure will be the negative beginning cash balance of the 4th quarter in 1985. Adding to it the receiving of funds and subtracting from it the application of funds results in SR:13,368,000 the ending negative cash balance of this quarter and going on, applying the same procedure until reaching the end of the 3rd quarter of 1987, where the ending cash balance is SR:6,611,000, which is considered the contractor's proposed profit of 12% of the contract price. The maximum overdraft is SR:13,368,000. But when this contractor applied to the bank to get this as a term loan, the bank approved only to give him SR:11,000,000. With the SR:11,000,000 term loan, the ending cash balance will be revised as shown in the Table. But still the contractor has a negative net cash flow on the 2nd, 3rd and 4th quarters while executing the project which he has to provide from either his own or from outside resources.

Remarks on Cash Flow No. 1

1. Each progress payment is reduced 20%; 10% as retention money and 10% as payback of advance payment.

2. Application of funds for the 3rd quarter in 1985 (which is considered the first quarter in the execution of the job) was the highest among other quarters (SR:12,842,000) which meant that the contractor had to

spend a lot for the mobilization expenses.

3. In this cash flow, the contractor did not include the repayment of the term loan, which includes the cost of this term loan (the interest rate, cash margin, etc.) which eventually reduces the proposed profit.

4. This cash flow showed that the contractor is financially able, because in the 2nd, 3rd and 4th quarters he had a negative net cash flow even with the bank term loan. But it seemed that he financed the difference from his own funds (about SR:3,586,000).

5. Another proof of good financial position of the contractor is that he was able to get a term loan of SR:11,000,000 from a bank at this challenging time.

6. Banks in Saudi Arabia do not give contractors the whole amount needed or applied for (the maximum overdraft), but they study the quarterly or monthly needed overdraft and then decide how much to approve.

7. Banks in Saudi Arabia require cash flow projections from the contractors before they approve any proposed credit facilities to them.

8. Most of the materials, labor and equipment are from outside the Kingdom and were included in the overseas construction costs.

Cash Flow No. 2

Table 2.2 shows another cash flow for a different contractor. The timing in this cash flow is also on a quarterly basis. This report is a two year project. Starting at the first quarter of 1986 and ending at the end of 4th quarter of 1987. This cash flow includes the following balance:

1. Beginning cash balance.
2. Source of funds. This division includes the following as subdivisions: interim payment, release of retention money, term loan overdraft (O/D) and L/C (letter of credit refinancing).
3. Application of funds; this division includes: retention, construction cost, domestic expenses, repayment of term loan, repayment of overdraft and repayment of L/C refinancing.
4. Ending cash balance.

The Analysis of Cash Flow No. 2

The procedure of calculation in this cash flow is the same as the procedure that was used in cash flow No. 1. The profit of this contract is about 7.5% of contract price.

table (2.2)

CASH FLOW PROJECTION # 2

	1986				1987				TOTAL
	1/4	2/4	3/4	4/4	1/4	2/4	3/4	4/4	
1. BEGINNING CASH BALANCE		2,831	-453	-4,079	-6,584	-4,275	-375	982	
2. SOURCE OF FUNDS	16,197	7,330	7,135	9,508	11,244	7,533	4,533	2,600	66,080
- INTERIM PAYMENT	6,197	3,144	4,056	8,553	11,244	7,533	4,533	321	45,581
- RELEASE OF RETENTION MONEY								2,279	2,279
- TERM LOAN	10,000								10,000
- OVERDRAFT	0	3,246	2,234						5,480
- L/C REFINANCING	0	940	845	955					2,740
3. APPLICATION OF FUNDS	13,366	10,614	10,761	12,013	8,935	3,636	3,173		62,498
- RETENTION	620	314	406	855	84				2,279
- CONSTRUCTION COST									
(Material)	4,046	4,199	3,699	3,045	1,610	568	511		17,678
(Labour)	2,013	484	391	272	244	150	92		3,646
(Equipment)	1,436	1,848	1,266	954	304	188	81		6,077
(G. A. Expenses)	2,406	1,960	590	301	225	168	101		5,751
- Domestic Expenses	2,854	1,809	1,469	1,001	773	562	388		8,847
- Repayment of T/L			2,000	2,000	2,000	2,000	2,000		10,000
- Repayment of O/D				2,740	2,740				5,480
- Repayment of L/C Ref.			940	845	955				2,740
4. ENDING CASH BALANCE	2,831	-453	-4,079	-6,584	-4,275	-378	982	3,582	3,582

Remarks on Cash Flow No. 2

1. This cash flow seemed to be prepared after the contractor got his credit facilities from the bank approved.

2. The contractor in this cash flow had three types of credit facilities from a bank; term loan of SR:10,000,000 for two years, an overdraft and a letter of credit refinancing. The repayments of the term loan and overdraft started 6 months after obtaining them. The letter of credit refinancing started 3 months after obtaining it.

3. The contractor still had a negative net cash flow from the second quarter in 1986 to the end of second quarter in 1987 with a maximum of SR:6,584,000. This difference should be financed by him through his own funds or through other sources.

4. The application of funds for the first quarter is SR:13,306,000 which was the highest among other quarters. This is because the contractor had high mobilization expenses.

5. The cost of these credit facilities from banks are included in the general administration expenses (cost of bonds, interest rates, etc.).

6. The contractor in this contract did not have an advance payment. That is why he had prepared a large financial facilities need from banks (about SR:18,220,000).

7. The retention amount of percentage of retention is equal to 10% of each progress payment. This is applied only during the first year of the execution of the project. In the second year, he has only 0.75% as retention for the first quarter. No retention policy was applied for the remaining three quarters (second, third and fourth quarters in 1987).

Cash Flow No. 3

Table 2.3 shows the cash flow of one of the projects that belong to the Ministry of Communication. The timing of this cash flow is from March 1986 to June 1987. The time of the execution of this project is 15 months. This cash flow was prepared on a monthly basis. This cash flow has the following divisions:

1. Months: the first column in this cash flow represents the numbering of months (month No.1 means March 1986 and month No. 15 means May 1987).

2. Outgoings: this division includes the following: (a) labor, (b) equipment cost, (c) material (external), (d) material

TABLE (2.3)

CASH FLOW PROJECTION # 3

1.	2. OUT-GOINGS											3. INCOME				4. CASH-FLOW	
MONTH	LABOUR	EQUIPMENT COST	MATERIAL EXTERNAL	MATERIAL INTERNAL	SUB-CONTRACT SITE COSTS		EQUIPMENT PURCHASE	ADVANCE REPAYMENT	RETENTION	BANK REPAYMENT	TOTAL OUT-GOINGS	ADVANCE PAYMENT	BANK LOAN	INCOME	TOTAL INCOME	POSITIVE	NEGATIVE
1.	25,000.00	55,000.00	139,200.00			15,000.00					234,200.00		2,000,000.00		2,000,000.00	1,765,800.00	
2.	55,000.00	126,000.00	183,240.00			20,000.00					384,240.00					1,381,560.00	
3.	62,000.00	150,000.00	297,997.00			30,000.00				44,540.00	584,537.00				262,000.00	1,059,023.00	
4.	65,000.00	150,000.00	235,597.00	94,000.00		35,000.00				98,146.00	677,743.00				577,328.00	958,608.00	
5.	70,000.00	215,000.00	235,597.00	104,000.00		35,000.00				137,938.00	797,535.00				811,400.00	972,473.00	
6.	70,000.00	284,000.00	308,000.00	201,400.00		35,000.00				122,774.00	1,021,174.00				722,200.00	673,499.00	
7.	70,000.00	284,000.00	235,597.00	201,400.00		35,000.00				145,962.00	971,959.00				858,600.00	560,140.00	
8.	44,400.00	284,000.00	338,997.00	201,400.00		35,000.00				139,502.00	1,043,299.00				820,600.00	337,441.00	
9.	44,400.00	215,950.00	380,537.00	1,005,500.00	157,000.00	35,000.00				134,062.00	1,972,449.00				788,600.00		846,408.00
10.	39,400.00	145,000.00	247,408.00	1,105,100.00	157,000.00	35,000.00				146,798.00	1,875,706				863,515.00		1,858,599.00
11.	43,000.00	205,000.00	706,188.00	321,391.00	157,000.00	34,944.00				149,804.00	1,619,327.00				881,200.00		2,596,726.00
12.	28,000.00	125,000.00	391,317.00	11,000.00		20,000.00				329,657.00	904,974.00				1,939,160.00		1,562,540.00
13.										369,905.00	369,905.00				2,175,912.00	243,467.00	
14.										317,146.00	317,146.00				1,865,568.00	1,791,889.00	
15.																	
TOTAL	616,200.00	2,238,950.00	3,701,675.00	3,245,191.00	471,000.00	364,944.00				2,136,234.00	12,774,194.00		2,000,000.00		14,566,083.00	1,791,889.00	

(internal), subcontracts, (e) site costs, (f) equipment purchase, (g) advance repayment, (h) retention, (i) bank repayment, and (j) total outgoings for each month.

3. Income: This division includes advance payment, bank loan, period income and total income.

4. Cash flow: which represents the net positive or negative cash flow.

Analysis of Cash Flow No. 3

The outgoings for each month is calculated separately, and is equal to the summation of all labor cost, equipment cost, material cost (external and internal), subcontracts, site costs, equipment purchase, advance payment, retention and bank repayment. Total income is also calculated monthly by the summation of advance payment, bank loan and income. The summation of both total outgoings and total income will yield either a positive or negative cash flows. To illustrate this procedure, the outgoings for the first month is equal to SR:234,200 and total income is equal to SR:2,000,000, which will yield a positive cash flow of SR:1,765,800. This sum will be subtracted from SR:384,240 (the outgoings for the second month (zero), so the result will be SR:1,381,560 as a positive cash flow. The same procedure is used until the end of the 14th month, which yields SR:1,791,889 as a

proposed profit.

Remarks on Cash Flow No. 3

1. The contractor did not have an advance payment. So, to finance his mobilization and other expenses, he obtained a short term loan of SR:2,000,000.

2. From the cash flow, one can conclude that the highest on the outgoings list is the material (about SR:7,000,000), followed by equipment (SR:2,238,950). This is usually true for road construction requirements.

3. The contractor had negative net cash flows at the 9th, 10th, 11th and 12th months with a maximum of SR:2,596,726 on the eleventh month.

4. The contractor got paid two months after starting the job.

5. The contractor got a subcontract of about SR:471,000 for three months.

6. The retention policy is applied in this contract.

7. Equipment costs were either for depreciation or rent/lease expenses or both, but no new purchase of equipment.

2.2 Contractors Financing Requirements

The previous sections revealed some of the aspects of construction projects that affect the contractor's financing. This section will cover the contractor's financing requirements represented by working capital and equipment/plant financing.

2.2.1 Working Capital Requirements

Working capital is the amount of ready cash necessary to keep the business moving, for meeting current wage bills and purchases for taking advantage of trade discounts, etc. Working capital requirements are dictated by the pattern of cash flows of a specific project as well as by the pattern of cash flows of the total projects (cash budget) in which a construction company is involved. The profit margin, advance payments, retention, credit arrangements with suppliers and subcontractors, and the sources and methods of project financing are important for contractor's cash flows and, therefore, for their working capital needs. As seen previously, from the contractor's cash flow for a specific project, the cash flow may be negative for some time before it reaches break-even and starts going positive. Until then, the contractor will need some kind of working capital financing. Also, working capital for a specific project is especially needed when the percentage of retention is greater than the profit margin. Moreover, it is unlikely to find a project where (billings/total contract)

= (costs/total costs). Each party of the contract wants to improve its own position by turning the above equality to an inequality. The owner wants to pay as late as possible so that is (billings/total contract) less (costs/total costs), while the contractor wants to receive payment as early as possible so (billings/total contract) more than (costs/total costs). In general, there will be always an unbalanced condition. (3,16)

The more the owner delays his payments, the more the contractor is in need of working capital financing. This financing may come externally (from banks or other sources outside the company and its affiliates), or internally (from the company own resources).

Before discussing the internal and the external working capital financing, let us remember some of the methods which help to minimize, and sometimes eliminate this financing cost from the list of contractor project expenses. One of these methods is front-end loading (which was discussed previously). This is sometimes effective because contractors are pressed mostly during the first few months of the project. Efficient and aggressive cash management on the contractor's part is also important in reducing the working capital financing needs. It includes prompt submittal of billings and prompt check depositing, investment of excess funds into short-term instruments and in general, manipulation of cash inflows and outflows so that the net cash flow does not dip into the negative region. More of these cash flow management techniques were discussed previously in managing cash flow.

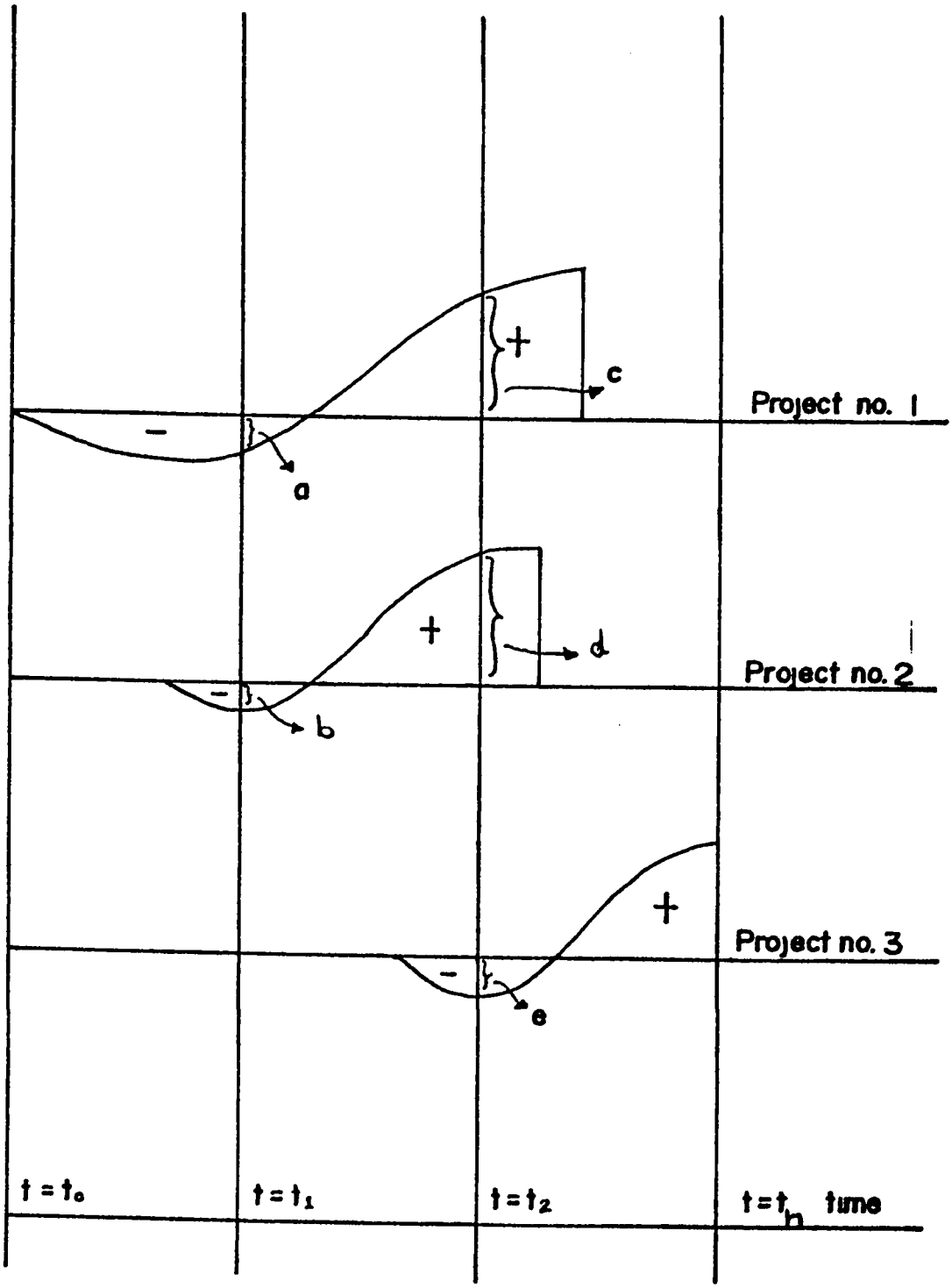
2.2.1.1 Internal and External Working Capital Financing

Internal working capital financing refers to the use of retained earnings (for our purposes, 'retained earnings' refers to that part of cash which is not paid out in dividends but is retained and available for reinvestment in the business) and funds from other on-going projects. Figure 2.5 shows, in a simplified way, how a construction firm can finance its working between $t = t_o$ and $t = t_n$, the company works on these projects. At t = t1, it is clear that the company cannot rely on cash inflows from other projects to cover its financing needs which are equal to (a+b). On the contrary, at t = t2 projects 1 and 2 with (c+d) cash inflows can provide working capital for project 3 which needs (e) financing. It is essential that all the projects will end up with the expected profits. Otherwise, borrowing from one project to pay losses on the other is financially dangerous. Similarly, draining cash flows from future projects to the present project is a technique with snowballing effect which is doomed to fall. (3)

Another source of internal working capital is equity financing. Equity is that part of the business that is totally owned by the single entrepreneur, a partnership, or a corporation. The investments of participants may be totally in cash, equipment, land, buildings, knowledge, etc., or it may be a combination of some or all of these things. It is shown on the company accounts as assets. So, by introducing to the company additional partners, it will increase the equity capital in the company and, therefore,

Fig (2.5)

INTERNAL CAPITAL FINANCING FROM ON GOING PROJECTS .



will increase the working capital. The additional capital will enable the company to increase its borrowing credibility, which allows further expansion by bidding on larger projects and taking greater advantage of trade discounts. (12)

A further method of increasing working capital is by a joint-venture. A joint-venture is established through the unity of two or more contracting firms. The members of a joint venture can be entrepreneurs, partnerships, or corporations. A joint venture serves to combine skills of the participating companies which allows expansion to different types of construction projects, increases equity which leads to a stronger financial position which will help to enhance the opportunity of being awarded more contracts and in getting approvals of needed financial facilities from lenders. It is also considered a means of spreading risks which associated with construction business.

The external financing, for our purposes, refers primarily to credit facilities from commercial banks. (This will be discussed later in Section 2.3.).

2.2.1.2 Plant and Equipment Financing Requirement

Investment in equipment and plant represents a large part of the capital asset investment of construction firms. On an average, about 20% of the total assets of a large contractor are in plant and equipment. The extent of such an investment is a function of the types of the company's projects and of its financial policies. For

instance, the equipment needs of a contractor specializing in highway construction are greater than those of a general building contractor. There are three ways by which the contractor can meet such an equipment needs. These three ways are buying, leasing or renting. The decision on each is considered a major financial decision.

Procure Equipment by Buying

Firms usually buy new most of their basic equipment. Buying new equipment from vendors will affect the cash position of the company because the price of construction equipment is relatively high compared to used types of equipment. Vendors from whom equipment is purchased generally have available financing management. Contractors (especially those with strong financial position) can buy the needed equipment in cash and receive a discount up to 15% of the original purchase price. Usually this is done with types of equipment that are always needed by the contractor. For example, contractors that are doing highways or road construction always need trucks, payloaders, graders and rollers. When it comes to quantity, there is a difficult decision to be made. Vendors can sell their equipment on an installment basis so that the contractor will make a down payment (usually 10% to 25% of the purchase price) and the balance can be paid off in monthly installments. This balance will include the principal and interest. Usually, the vendor retains ownership of the specific unit or units of equipment until the last payment is made. A further method of

buying equipment is by 'borrow then buy' arrangement. In this method, the contractor has to arrange a loan from a lender, then uses this loan to finance the proposed needed equipment. In this arrangement, the contractor must be aware and measure the interest on the borrowed funds versus the discount that will be gained if the contractor buys the required piece of equipment in cash arrangement. (3,12,15,25,26)

A big problem usually facing the contractors when purchasing equipment is the repair/maintenance cost. So, when contractors decide to buy their equipment, they have to be able to maintain and repair their equipment by having a proper maintenance shop. But, on the other hand, big contractors can rent or lease some of their equipment fleet to other contractors to get benefit (by increasing the cash inflow) of idle equipment.

Leasing and Renting

The concept of leasing begins with the understanding of a fundamental issue; that it is mainly the use of an asset, and not ownership that generates benefits.

A lease is a transaction where the owner of an asset allows another party to use the asset for a specific period of time for a specific price. The owner of the equipment is referred to as the lessor, while the end-user of the equipment is referred to as the lessee. The contract that states the terms, conditions and payment for the use of the equipment is called the lease agreement.

The Development of Leasing

The date of the first appearance of leasing is often cited as 1877 when the Bell Telephone Company (USA) began leasing its telephone to users instead of selling them. However, leasing was conducted in the times of the Romans and there exists evidence that the ancient Sumerians conducted lease transactions some 4,000 years ago.

The development of railways in the 19th century saw a major advance in leasing. The railway companies were unable to cope with both the expansion of passenger and goods traffic with the result that the conveyance of goods was left to independent carriers. Many owners had insufficient funds to purchase wagons and private investors moved in with lease arrangements such as the North Central Wagon Company (now Lombard North Central) in the U.K. and the Railroad Car Trust of Philadelphia.

By the end of the 19th century, short-term leases were available for cotton looms, electricity and gas meters, telephone systems and various manufacturing equipment. In Europe and the U.S., equipment leased to restrict competition became a popular practice up to World War II and lease-usage became a common way of acquiring manufacturing equipment.

Contemporary leasing can be traced back to 1952 with the incorporation of the first independent firm in the U.S. to engage in equipment leasing (the United States Leasing Corporation).

Expansion in the U.S. leasing market grew rapidly through the fifties with American leasing companies' establishing subsidiaries and joint ventures in leasing, and in Canada and Britain by 1960. During the early 1960's, leasing companies were established in France, West Germany, Japan, the Netherlands, Norway and Finland. The reason for the rapid growth of leasing through the 60's can be attributed to a number of factors. Leasing provided an alternative source of finance in times of limited availability of capital; fiscal advantages such as investment tax credit and depreciation allowance could be taken by lessors on equipment purchased for leasing, the cash flow advantages of leasing were attractive to lessees, and leasing could be used as a sales aid offering an alternative to purchase.

Leasing has grown to become a major source of financing in 37 nations. In 1982, a total of US $13.6 billions of new lease business was signed in Europe alone. Today, leasing is a developing financial product in another 19 countries, bringing the total of 56 nations where leasing has been established. (18)

Types of Leasing

There are two main types of leasing transactions: the operating lease (or service) and the financial lease (or non-cancellable).

The Operating Lease

In the operating lease, the following characteristics are

found :

- The life of the lease (the 'term') is substantially less than the useful life of the asset.

- The lessee does not acquire a right to purchase the asset at the end of the term of the lease at a predetermined fixed price. He may, however, be able to purchase at fair market value.

- The ownership of the equipment remains with the lessor who has the responsibility for maintenance, insurance and other obligations.

- The lessor does not recover the value of the investment in the asset in one lease.

- Under the operating type of lease, the contractor avoids the risks associated with the operation of the equipment and the training of a service staff. He also avoids tying his capital to equipment that may be used only for a short-lived need.

- Payments for operating leases are reported as current business expenses and do not affect the current assets and liabilities of the firm.

- At lease end, the equipment under an operating lease is sold at market value or re-leased.

An example of an operating lessor is budget Rent-A-Car. (18)

The Financial Lease

In the financial lease, the following characteristics are found:

- The term of the lease is usually greater than 12 months.
- The lessee usually has a first right to purchase (purchase option) the equipment at the end of the lease for a value significantly below the expected market value for such equipment.
- The lessee, the end user, is responsible for the legal use, maintenance, insurance, and all obligations of ownership, except ownership itself.
- The investment in equipment is recovered fully throughout the life of the lease through payments and purchase option made by the lessee. The rentals and purchase option cover the full cost of the equipment plus a return to the lessor over the term of the lease.
- The lease contract is non-cancelable, or cancelable after the payment of a large penalty.
- In effect, the financial lease is similar to debt financing. So, it is considered a combination of borrowing and purchasing the asset.
- For accounting purposes, the financial lease may be included in the current assets and liabilities, or be treated like an

operating lease, (i.e. not affecting current assets and liabilities). In the latter case, a firm effectively achieves increased borrowing without showing it. (7,9,11,17,18)

Classic Advantages of Leasing to Contractors

The following is a list of the features and benefits of leasing to clients (contractors):

- By leasing, very often, 100% of the equipment cost can be financed.

- Cash flow advantages stem from the lower up-front capital payments required on a least compared to other forms of finance.

- Leasing arrangements are very flexible. Leasing has proved more adaptable than other forms of financing. Rental payments may be varied according to the revenue expectations of contractors, and arrangements such as 'balloon' payments at the front or back end of leases and 'stepped rentals' may be designed to suit the lessee's specific need.

- Leasing helps to vary the borrowing portfolio. Existing credit lines are often left undisturbed through leasing.

- It is frequently quicker and more convenient to use lease finance through standardized documentation, or add new equipment to an existing lease, than to go through other forms of debt or equity issues.

- Leasing can be a hedge against inflation, particularly if the rate is fixed, since you are paying in today's currency units for yesterday's purchase.

- A fixed lease payment is easier to budget because it offers the lessee protection from costly high interest rate periods.

- Long leasing terms are available in countries with maturing leasing industries. In some cases, leasing provides the only source of medium-term funding.

- Joint ventures and project financing can be difficult if consolidation between the parties is not possible, or when ownership in assets is an issue. In such cases, leasing, so long as it has an acceptable guarantee and/or access to the asset in the last resort, can answer this problem.

- Depending on the credit of the lessee, additional charges in acquiring equipment, such as delivery and installation charges, inspection costs, consultant's fees, and other incidental or ancillary costs may be added to the capital cost of an asset and amortized over the lease period.

Leasing in Saudi Arabia

Leasing facilities are relatively new in Saudi Arabia. Present forms of leasing have been conducted, with any significance, only over the last 4 years and then only on a sporadic basis. In Saudi Arabia, leasing facilities are provided by some of the equipment

vendors (Zahid Tractors) and some of the commercial banks (i.e. Saudi American Bank and Saudi French Bank). These leasing facilities are acceptable and appropriate in Islam and conform to the laws of the Kingdom. Leasing earns rental income and is not an interest bearing facility. So, it will be a good substitution for a debt financing (borrow then purchase) which is not acceptable in Islam. (18,26)

For leasing to take hold anywhere, three basic factors must be present. They are:

- Economic environment must be healthy.
- Taxation on leasing in the country does not hinder the growth of leasing.
- A certain level of market sophistication must be present.

While the first two factors have been clearly evident for some time, the last factor has been lacking in the past. With the global economic pressure becoming evident in Saudi Arabia over the past two years, management in corporations have been challenged to respond and are now willing to consider financing alternatives. (18,26)

All of the classic advantages of leasing hold true in Saudi Arabia. The emphasis of their impact, however, differs between companies as each company has a different set of needs. There is no doubt that one advantage is common in all cases and that is

capital conservation.

Leasing has received much publicity in other nations for bearing significant tax advantages. While leasing may offer tax benefits, it is incorrect to isolate leasing in this viewpoint alone. So, rentals in a lease in Saudi Arabia maybe deemed to be an operating expense and, therefore, certain tax advantages may be available. As an operating expense, the rentals lower the taxable profit base of the lessee. The role of commercial banks in leasing in Saudi Arabia will be discussed later. (18,26)

Renting

The concept of renting is about the same as that of leasing, but they differ in the period of which the asset will be used. Usually, this period is in days, and sometimes, in hours, depending on the type of needed equipment. Renting is applied for those types of equipment that are rarely needed and/or costly to acquire (i.e. a rock breaker). Mostly, all renting contracts are like the operating lease contracts, where they include any required insurance policies and maintenance/repairs services (responsibility of the renting agency).

Buy or Lease or Rent

The decision to buy or lease or rent is the responsibility of the financial manager of the contracting department together with the technical department.

The decision to rent is the easiest to select, because rentals are used for those types of equipment that are needed for short periods (days or hours), but the decision between buying and leasing is more difficult. The difficulty can be easily understood if we examine the counter arguments to come to common believes about costs of leasing.

In leasing, the leased equipment are not considered as a part of the company assets. At the same time, their depreciation is not included in the company expenses, resulting in the company not taking a benefit from this depreciation as a tax reduction instrument. From this point, leasing is generally assumed more costly, especially, if the company uses accelerated depreciation methods. Yet, this does not take into account the fact that competition may force the leasing companies to pass the tax advantages associated with equipment ownership to the contractors.

Leasing is generally considered more costly if leasing rates are higher than borrowing interest rates. It is counter argued that total costs may be lower in the leasing options, if additional services provided by the leasing company under the contractual agreement are taken into account (e.g. repair and maintenance services).

Large residual values usually make the ownership option more attractive. Again, if expected residual values are high, competition among leasing companies will naturally reflect them in lower lease rates. Leasing is generally considered a preferable choice if

the equipment experiences rapid obsolescence.

The above examples illustrate how difficult the decision may actually be. Leasing may be good because it preserves lines of credit and cash for other activities. It does not impose restrictive covenants, that may be required in loan agreements, and frees the contractor from expensive repair and maintenance service costs (if operating lease used only), especially if the proposed construction project will be executed in a remote area. Finally, leasing reduces the contractor's flexibility in dealing with the equipment (for example, transferring the equipment from country to country or from place to place).

The economic comparison of lease versus ownership financing usually has the following impact on the cash flow :

For Ownership Financing:

1. Debt service payments (principal and interest or cash payment) (-)

2. Tax shield from depreciation (+)

3. Tax shield from interest payments (+)

4. Investment tax credit (not applied in Saudi Arabia) (+)

For Leasing Financing:

1. Rent expenses (-)

2. Tax shield from rent expenses (+)

3. Possible investment tax credit passed to the contractor (+).

The sum of the cash flows for each period of time will give the respective benefits (costs) for each alternative. Then one can discount the future cash flows and compare the net present value (NPV) of these two alternative solutions. Furthermore, it is more appropriate to adjust the NPV offer taking into account the side-effects associated with each solution. For example, lease financing, in particular, may include services not directly covered by the cash flows. The adjusted present value (APV) provides the best criterion. (3)

Another important point to be considered, especially for the Moslem contractors, is to compare between leasing financing and debt financing from banks (borrow then purchase procedure); the first choice is Islamically acceptable, while in contrast, the second choice is not acceptable Islamically because it includes the issue of interest rates in its arrangements.

The researcher will conduct a survey of the contractor's financing system in Saudi Arabia which will be detailed in Chapter 3.0. In this survey, there will be a question related to leasing financing and debt financing.

2.3 The Role of Commercial Banks in Construction Business Financing in Saudi Arabia

In Saudi Arabia, commercial banks are considered one of the most important sources of a contractor's financial facilities. From

interviews with five banks (Saudi American Bank, Saudi French Bank, Saudi National Commercial Bank, Saudi Investment Bank and Saudi British Bank), the following financial facilities were found to be used by contractors: external working capital financing, contract bonds, documentary letters of credits, leasing, hedging and syndicates services.

2.3.1 Financial Facilities Provided by Commercial Banks to Contractors and Their Associated Risks in Saudi Arabia

In this section, the researcher will discuss various financial services.

2.3.1.1 External Working Capital Financing

As mentioned previously, external working capital financing for most construction firms is granted by commercial banks as loans. These loans are of three types: short-term loans, term loans (medium term loans), and finally, long-term loans.

Short-Term Loans:

Short-term loans consist of the following main types: the overdraft (line of credit), short loans and the progress payment financing (PPF) which has recently been introduced in the Kingdom.

The Overdraft (Line of Credit)

The line of credit is an agreement whereby the lender declares its intent to extend a certain amount of money, to some

specific limit, under certain specified conditions, to a particular company. It is a commitment by the lender to make a loan and if and when it is needed. A line of credit necessitates, then, that a contracting company present its needs for funds in advance of the actual time the funds are needed. This requires some planning and thought in order to determine the amount that will be needed and for which the contractor can expect to receive a commitment. Once the agreement is made, the contractor can receive funds up to the line of credit limit when he needs the money. (5,12) The contractor will pay interest only on the usable funds (outstanding) for the length of time he uses the money. This interest rate consists of a prime rate plus a spread. The prime rate is based on the cost of funds which the bank will be charged from the money market. Cost of funds in Saudi Arabia is based on three rates: Jibor, Bibor, and Libor. Jibor stands for Jeddah Inter-Base Overnight Rate, Bibor stands for Bahrain Inter-Base Overnight Rate, and finally Libor stands for London Inter-Base Overnight Rate. Jibor and Bibor can be used with Saudi Riyals, while Libor is used for US dollars. Saudi contractors are mostly using Jibor and Bibor. The prime consists of Jibor or Bibor rates plus profit. This profit is about 1 or 2 percent. The spread ranges from 0.25% to 2% (depending on how risky the contractor is). By this, banks are gaining profit from both the prime and the spread. That is why overdrafts are more expensive than other forms of loans, but they are more flexible than any other forms of loans. Banks in Saudi Arabia may charge a minimal fee for any unused portion of the line of credit. In effect, this is a commitment fee which the

bank assesses because it is obligated to lend the money at some future time. The interest rate is actually calculated daily. Most banks in Saudi Arabia require that lines of credit be cleaned up semi-annually (every six months) or on a yearly basis. The borrower (contractor) has to sign with the lending bank a promissory note that covers the principal amount, the maturity date, the amount of the interest and any security requirements. Sometimes, depending on how risky the contractor is, banks may require a compensating balance or cash margin (a percentage of the given line of credit) from the borrower. But if this is done, then the percentage of the interest rate (prime + spread) should be reduced accordingly because banks lend the funds in these compensating balances to other borrowers to generate income. (26)

Bank short loans

Bank short loans in Saudi Arabia are mostly for a period of one year, maximum. This type of credit is usually needed by contractors if advance payments are not given. For this type of credit, the bank knows its commitment and profit exactly. Also, the borrower knows what this loan will cost him. Usually, the percentage of the interest on short loans consists of Jibor or Bibor rates plus spread (profit). This profit ranges from 0.25 percent to 1 percent depending on how risky the contractor is. The percentage of the interest rate charged by the bank on short loans is less than those from a line of credit. However, in the short loans, banks charge the interest rate on the whole loan amount, while in lines of credit, banks charge the interest rates only on

the utilized amount. Also, one can notice that banks are recognizing profit from the spread only in short loans. The method of how the contractor should payback this short loan is different from bank to bank and from contractor to contractor, depending on the agreement between them. The effective cost of a bank loan may not be the stated rate of interest. The effective cost is related to the interest charge, the amount of money that the borrower can use, and the length of the loan. The following equation is used to determine the true or effective cost of a loan: (Interest paid)/(proceeds of the loan that the borrower may use) x (12)/number of months that the firm has use of the proceeds). Most contractors in Saudi Arabia pay back their loans on maturity (at the end of the loan period). For example, if the loan amount is SR:10,000 at 6% for one year, then the cost of the loan is (600)/(10000) x (12)/ (12) = 6%. By this, the contractor has the use of the SR:10,000 for the entire year and pays SR:600 for the use of the proceeds; thus, the effective rate of the interest is also 6%. Sometimes, the lending bank may require that the contractor pay the interest in advance, that is, the bank requires that the loan be discounted. In this case (return to our example), the contractor does not receive SR:10,000 but gets SR:9,400 (SR:10,000 - SR:600). In effect, the contractor is paying SR:600 for the use of SR:9,400, which increases the cost of the loan. Instead of an interest rate of 6%, the interest rate is 600/9400 x 12/12 = 6.38%. So, by discounting the loan in advance, the bank has caused the true cost of interest to rise from 6 percent to 6.38 percent. But, if the bank requires from the contractor a cash mar-

gin or a compensating balance, say, 20% of the amount of the loan, then the true cost of loan will be 600/800 x 12/12 = 7.5%. The contractor in this case is, in effect, paying SR:600 for the use of SR:8000 (10,000-20%(10000) and the effective cost of that loan is 7.5%, which is considerably higher than the stated 6% interest cost. Another important point to be considered here is the effect on the effective interest rate of paying off the loan on an instalment basis instead of paying the loan in one lump sum at the end of the loan's duration. The monthly payments are determined by adding the principal and the amount of the interest and dividing by the number of pay periods. If the above loan is paid off in equal monthly installments, then the monthly installment is SR:883.33 [(SR:10,000 + 600)/12]. Each month, the borrower pays SR:883.33, which is SR:60 in interest and SR:833.33 in principal. Then, after six months, the loan is reduced to SR:5,000, but the monthly interest is still SR:50. With this installment loan, the contractor has the use of only one half of the proceeds for the duration of the loan. At the end of six months, the contractor will have retired SR:5,000 of the loan and has only the use of SR:5,000. The average amount of proceeds that the contractor actually used for the duration of the loan is SR:5,000. Thus, the effective interest cost becomes SR:600/5000 x 12/12 = 12% which is significantly higher than the stated 6% interest cost of the loan. Usually, lending banks require borrowers to sign promissory notes against their needed loans (the amount of the loan covered in this promissory note is mostly equal to the principal amount). Under Islamic law, the interest issues are forbidden and not accepted.

So, in order for banks to protect their rights in case of claims or disputes which may be initiated by borrowers (in case of defaults in repayment of loan), banks may have two options, either by discounting loans to borrowers or by making the amount of the loan in the promissory note equal to the principal amount plus the interest (cost of the loan). Banks do not attempt to do it with all borrowers. (5,6,7,9,11,12,17,24,26)

Progress Payment Financing (PPF)

The progress payment financing (PPF) is an instrument created in the Kingdom by commercial banks as a solution for the late progress payments to contractors by owners. Banks cannot welcome the idea of a client (contractor) losing his liquidity because of these late payments by owners, however, this loss of liquidity can provide opportunities for progress payment financing by banks. The certificate, although not a negotiable instrument, will generally call for payment of a certain sum of money within about 30 to 90 days from the owner/ministry. This progress payment certificate, although not payable to a bank, is payable through the bank which has an assignment of contract proceeds. Many ministries are willing to give the guaranteeing bank formal acknowledged assignments. The term of this PPF is either 30, 60 or 90 days, and cannot be more than 90 days. The interest paid on this type of loan is the same as that on short loans. But in this type, the contractor always repays the loan at maturity, including the interest amount. An important point to be considered in this type of

loan is that, when the contractor gives the lending bank a progress payment certificate, the bank will not finance him with the whole amount that is written in that certificate because the owner eventually will deduct from it 10% as retention and 10% as repayment of part of the given advance payment (if any). Because of this, the lending bank will discount this certificate and will finance the contractor with for 80% of this certificate. Banks state that this instrument really works. (26) Figure 2.6 illustrates the flow chart of the progress payment financing technique.

Term Loans (Medium-Term Loans)

A term loan is a contract under which a borrower agrees to make payment of interest and principal on specific dates to the lending bank. The maturity of a term loan in most banks in Saudi Arabia is two to three years. Contractors use term loans either to acquire fixed assets (like an expensive piece of equipment) or for paying off bank short term loans. Most of these term loans are amortized (paid off) in equal installments over the life of the loan. The loan is amortized with some of its principal repaid in each installment. So, the loan is repaid gradually over its life rather than full due all at once. Amortization is especially important whenever the loan is used to purchase a specific item of equipment; hence, the payment schedule should be matched to the productive life of the equipment. Repayments are made either monthly, quarterly, or half-yearly to banks. Most banks in Saudi Arabia give borrowers grace periods. In term loans, this period is

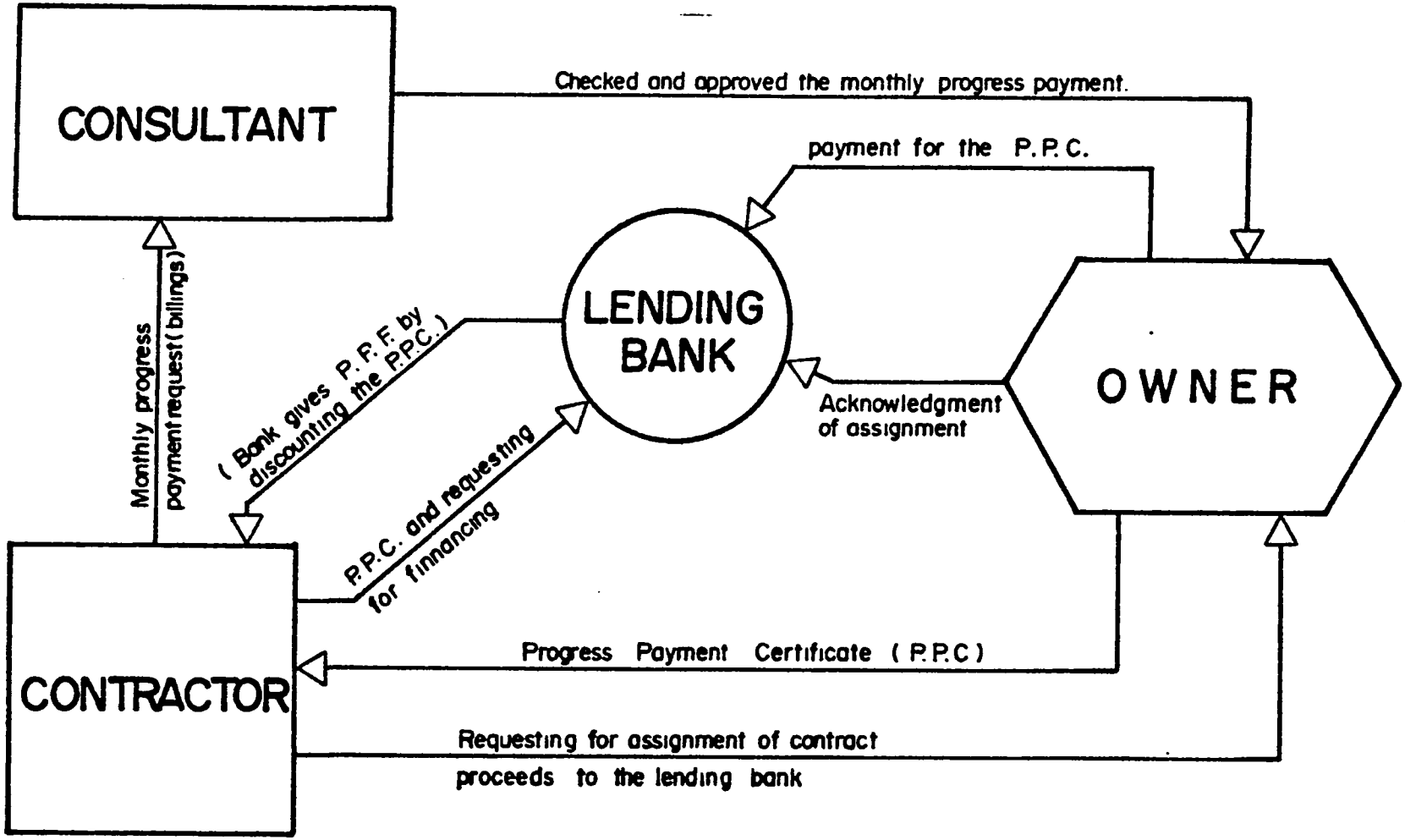


Fig (2.6)

PROGRESS PAYMENT FINANCING FLOW CHART.

up to one year. During this grace period, the borrower will not start paying off his loan immediately but after the finish of this period. Most term loan interest rates are fixed. These rates consist of a prime plus a spread. And usually are higher than those for short-term loans. One reason is that they run longer, and bankers need to be compensated for the needed detailed analysis of applicants for them. Relatively few banks' term loans involve a 'balloon' which means a final payment much longer than the previous payments. (6,7,9,11,17,26)

Bank Long-Term Loans

Bank long-term loans are similar to other term loans, but differ in their periods. The periods for long term loans vary from seven to ten years, at a maximum, in most banks in Saudi Arabia. The grace period for these types of loans are two to three years. Repayment schedules also depend on amortization principles. (26)

2.3.1.2 Bonds

Bonds are three party instruments, the principal (the contractor), the obligee (the owner), and the guarantor(s) of bonds which can be a surety company or a bonding bank. This surety company (or a bonding bank) guarantees that the principal will make whole any loss, the obligee might sustain by reason of the principal's failure to carry out and perform all conditions of the agreement entered into between the principal and the obligee. (15)

There are two formats for contracts bonds, surety bonds or

security bonds.

Surety Bonds

Surety bonds are issued by surety companies. The obligation of the surety bonds are up to 100% of the contract price. These bonds are mostly conditional bonds. Under this type, the owner is able to call the bond by presenting a draft with the evidence required by the surety that the contractor has not performed an obligation (call on default). If the surety proves that the owner's request of call is not true, then the surety will not reimburse the owner for his faulty call. Surety bonds can create a false sense of security for a beneficiary (owner), and because of this, such contracts must be carefully drafted to achieve the degree of protection sought. (22)

Security Bonds

Security bonds are mostly issued by banks in the form of banks letter of guarantees. Their coverage is usually less than 100% of contract price (usually up to 30% of contract price). The obligation of the bonding bank is to pay a sum of money. These bonds are mostly unconditional. Under this type, the beneficiary (owner) has the right, in its sole and absolute discretion, to demand payment pursuant to the issued guarantee without any statement of reasons for the demand. Also, the contractor has to immediately reimburse the bank for any and all amounts paid to the beneficiary under a demand conforming to the requirements of the guarantee, regardless of and without set-off or deduction, for any

claims which it may have against the beneficiary or any other party to the contract. By this, the contractor as well as the issuing bank are subject to the risk of unfair calling of the bond. In the event that banks from time to time receive one or more requests or demands from the beneficiaries to extend the guarantee, or th "hold value", or any similar requests or demands regardless of how worded, the bank in each case may in its sole discretion, but without obligation to do so, extend the issued guarantee to the date specified by the beneficiary, or if no date is specified, to a date determined by the bank. (22)

Bonds in Saudi Arabia

In Saudi Arabia, all bonds are in the format of security bonds and are issued mainly by commercial banks, but rarely issued by insurance companies which have permission from the Ministry of Finance and National Economy.

The Ministry of Defense bonds are special. A number of them are U.S. Corps of Engineers managed because U.S. Army Corps of Engineers is administering the Saudi Arabian Military Construction Program. This U.S. Corps of Engineers has accepted U.S. surety performance bonds in place of bank guarantees on Corps-administered work. This development follows an agreement on performance guarantee reached in July, 1975 between the Associated General Contractors (ASC), the Saudi Government and the Corps of Engineers. (20,26,32).

All of these bonds are of the unconditional type. There is

an important point to be made about why the Saudi Arabian Government takes bank guarantees. These bonds are considered additional support, or extra opinions, or the judgements made by the Ministries. In other words, the Saudi Government is looking for a third party opinion as to the credit worthiness and abilities of the companies which are carrying out their development plans. They put considerable value on the judgements and the commitments of the guaranteeing banks. Bank experience with the Saudi Government in calling guarantees has been extremely good. They have been patient and reasonable with contractors when confronted with reasonable requests. Moreover, the Ministry of Finance and National Economy's circular in January 1986, instructed government departments to be particularly careful in calling bonds, and to set up special committees to study individual cases before proceeding. This Ministry ruling followed orders from the Custodian of the two Holy Mosques, King Fahd, who is said to be worried that arbitrary or frequent bond calling will not create the sort of atmosphere in which the private sector can develop its potential.

Banks in Saudi Arabia may demand cash collateral for its obligations under the issued bonds from the contractors in such amount as the banks may deem adequate for their securities. Banks may establish a separate cash collateral account in the name of the contractor for this purpose.

Saudi Arabian Monetary Agency (SAMA) regulates the commissions (fees) taken by banks for issuing different types of bonds. These commissions are as follows: 0.25% per annum for the

first SR:10,000,000 of the bond value, and above SR:10,000,000 the commission will be 0.125% per annum.

From banks' experience in Saudi Arabia, there are four main types of bonds issued by Saudi Banks that are related to construction contracts. These bonds are: bid bonds, performance bonds, advance payment bonds, and retention bonds. Depending on the type of the contract that will be used, these types of bonds may vary.

Bid Bonds

The bid bond is a guarantee that the contractor, on being declared the successful bidder, will enter into a contract with the owner for the amount of its bid and will provide the required contract bonds. Also, it serves to screen out irresponsible and undercapitalized bidders. These bid bonds are required in competitive (open) bidding procedures. Lump sum and unit-price contracts are examples of types of contracts in which bid bonds are required. Tendering contractors are required to provide bid bonds which should accompany their submitted tenders. (2,16,17)

There are two forms of bid bonds in general use. One of these is a liquidated damages bond in which the bonding bank agrees to pay the owner the entire bond amount as damages for default. The second type is a "difference in price" in which the bonding bank will pay the amount of bond to the owner, and at the same time, the defaulted low bidder must pay the owner the difference between his low bid price and the price the owner must

pay to the next lowest responsible bidder.

Bid bonds in the form of cashier-cheques or cash money are not acceptable to replace the bid bond in governmental projects. The value of the bid bond in Saudi Arabia is usually 1-2 percent of contract price. Bid bonds can be called by the owner from the issuing bank, if the contractor is the successful bidder and does not accept the contract or if the contractor withdraws his bid before the awarding date.

If the successful bidder has been informed by a registered letter that his bid is accepted, then he has to furnish the other required bonds (for example, the performance bond) within 10 days of receiving this letter. But, if this successful bidder does not furnish the required bonds within this specified date, the government authorized people can give him another chance to do so, but for a period not exceeding 10 days from the previous specified date. Then if he does not, his bond will be called and then liquidated. Also, if the bid bond amount for the low bidder is less than the specified percentage of this bond, and it happened by mistake, then the contractor's bid is acceptable but he has to remedy this situation by obtaining the required bid bond within three days after the declaration date. If the government agency proved that the deduction of the bid bond amount was intended then his bid will be refused.

From the banks' viewpoint, the importance of the bid bond is not in the fee paid by the contractor but rather in the expectation of the higher fees collected from the performance bonds issued in

case of contract award. Also, banks require a cash deposit (cash margin) as a security from the contractor for issuing this bond. The cash margin amount differs from contractor to contractor, depending on the bank's assessment. (26)

The term (period) of the bid bond in Saudi Arabia is 3 months and can be extended until the declaration of the successful bidder. The cost of the bid bond will be increased as this declaration date is delayed because the fees are calculated with respect to time (0.25 percent of the bond value per annum). Bid bonds can be returned to the bidders whom their bonds seem to be too high before the award date. On the declaration date of the successful bidder, the bid bonds of all other competitive bidders will be terminated, while the winner will convert his bid bond to a performance bond. Original copies of two bid bonds issued by two different banks in Saudi Arabia (Saudi American Bank and the National Commercial Bank) are presented in Appendix A.1.

Performance Bond

The performance bond guarantees that the contractor will comply with all of the obligations set forth in the contract. Also, it provides additional funds to the owner in the event the contractor fails to perform for any reason. The amount of this bond in Saudi Arabia varies between 5% and 10% of contract price. Usually, it is 5% of contract price for Government projects and 10% of contract price for some semi-governmental agencies such as Aramco and SCECO.

As mentioned previously, for all government projects, the performance bond should be submitted by the successful bidder within 10 days of being informed; an additional 10 days may be given, but if he does not obtain the bond his bid will be refused. The forms of performance bonds (in Saudi Arabia) are mostly as banks' letters of guarantee, see Appendix A.2. If the performance bond is issued by an insurance company, the value of the bond (for government projects) should not be less than 25% of contract price. (10)

Performance bonds are not required for consulting services or for direct procurement. Direct procurement includes all construction projects or materials purchased not exceeding one million Saudi Riyals. This direct procurement must be done and supervised by the Minister himself or by the director of any governmental agency. This is always done by soliciting at least three bids or prices and selecting the lowest negotiated price. (10) Performance bond values can be discounted gradually as the work progresses, but in Saudi Arabia, this treatment is used for government maintenance contracts only. (10)

A guaranteeing bank may require a cash margin from the bonding contractor as a security. This cash margin amount depends on the bank's assessment of the contractor as mentioned previously. The bank's fees on this bond are the same as stated previously by SAMA.

Performance bonds usually terminate at the initial acceptance date of the project by the owner, then replaced by another

guarantee called a warranty or maintenance bond to cover any defects that may occur during this maintenance period by reasons of contractor faults. In Saudi Arabia, the performance bond will not be terminated at the initial acceptance date of the project, but will be extended to cover the maintenance period and it will be replaced by what is called the maintenance bond. So, the termination date of the performance bond will be at the final acceptance date of the project, which is considered the end of this maintenance period (in most projects, maintenance period is one year after initial acceptance). (10,26)

Advance Payment Bond

Advance payment bond is required if the owner (government) offers an advance payment to its contractors. The amount of this bond must be equivalent to the amount of the approved advance payment. In the past (1982), the amount of this advance payment was 20% of the contract price at maximum level, but has now been reduced to 10% of contract price at maximum level. So, the amount of the advance payment bond should also be equivalent to 10% of the contract value.

The amount of this bond can be gradually reduced as work progresses, such that for each progress payment made to the contractor, 10% will be deducted as a coverage of this paid advance payment, until the total deducted amount from each progress payment reaches the equivalent amount of this paid advance payment. At the same time, the bonding bank will reduce his advance payment bond value by the same amount of these periodic deductions.

Also, the cash margin and the fee of this bond will reduce in the equivalent manner. The form of this bond is mostly as a bank letter of guarantee. See Appendix A.3.

Retention Bond

It is common practice for the beneficiary for whom a project is being built, to retain or hold back a portion of the progress payment which would otherwise be due, in order to provide a fund to cover unforeseen expenses due to any contractor mistakes in the construction. Since most contractors prefer to receive the progress payments as quickly as possible, they substitute a retention bond for the amount of the funds retained, to receive immediate payment. This expiration date of this bond is at the final acceptance of the project. Sometimes, this bond is provided at the initial acceptance date to release the retained money - without this bond the retained money will be released at final acceptance. If this bond is provided to the owner, then the owner will have 15% of the total bonds in his hand as a protection against contractor default (5% as performance bond and 10% as a retention bond). Figure 2.7 illustrates and summarizes the typical examples of different types of contract bonds in Saudi Arabia for government projects. It shows their amount and their months of coverage as follows in this Table:

Fig. 2.7 : CONTRACT BONDS IN SAUDI ARABIA

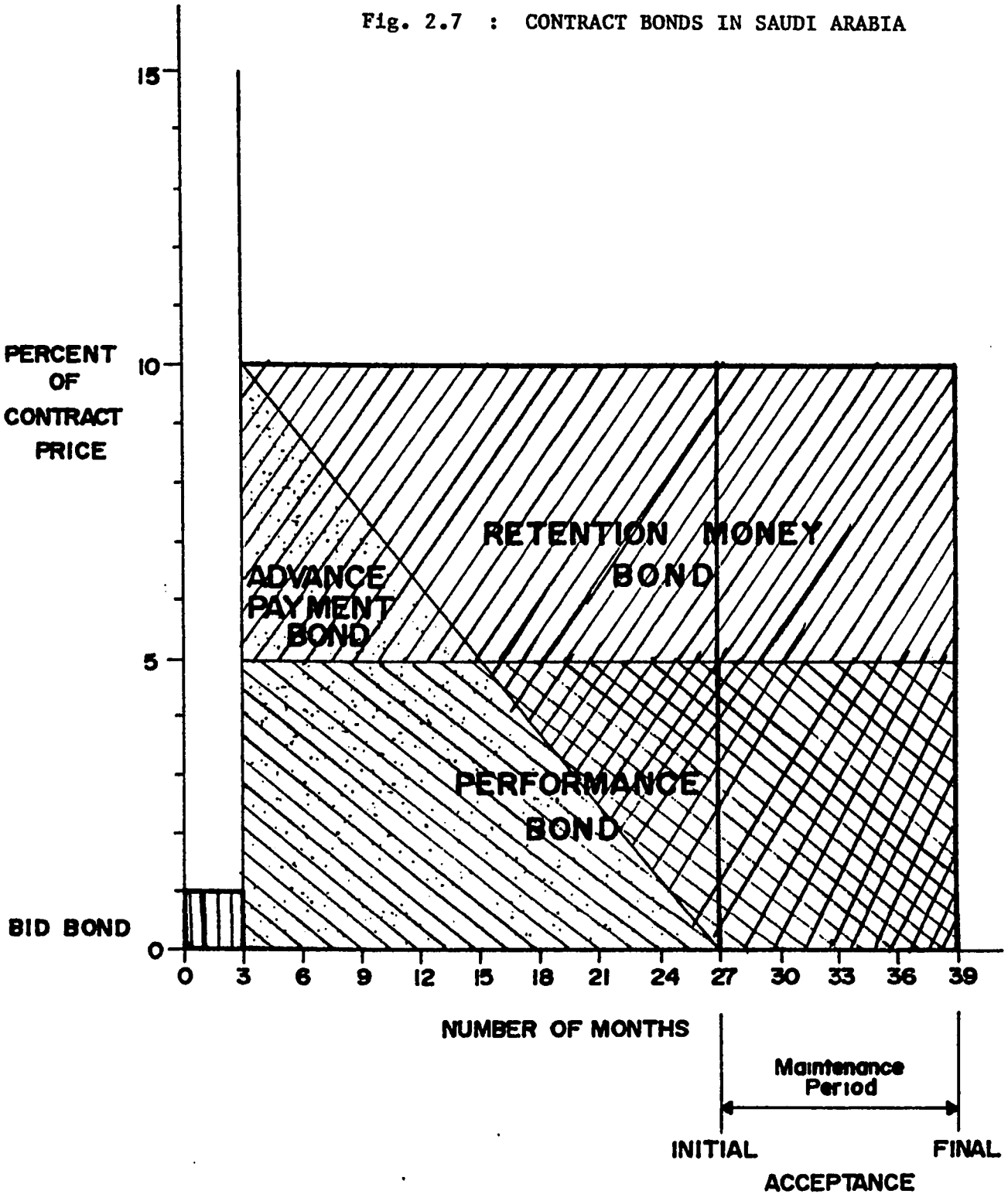


TABLE 2.4 : CONTRACT BONDS IN SAUDI GOVERNMENT PROJECTS

Bonds	Amount %	Months of Coverage
Bid Bond	1%	3
Performance Bond	5%	36
Advance Payment Bond	10%	24
Retention Money Bond	10%	36

2.3.1.3 Leasing Product by Banks in Saudi Arabia

Banks in Saudi Arabia have identified three forms of financial leasing for the market. The three forms are (1) direct lease, (2) sale lease back, and (3) vendor lease financing. (18,26)

Direct Lease

This type of lease occurs when a client of the bank wishes to acquire the use of certain equipment. A contract (the lease agreement) is entered into between the bank (as lessor) and the client (as lessee). The lease agreement covers the use of the specific equipment desired by the lessee for a specific period of time (up to 3 years). This period of time is referred to as the lease

term. The lessee selects the equipment he wishes to lease and negotiates with the seller of the equipment on the price, delivery, accessories, and warranties. The lessor (a bank) buys from the seller, the equipment selected and negotiated by the lessee, and leases it to the lessee. By the end of the lease term, the lessor has recovered all of its investment and earnings through rental payments made by the lessee. At the end of the lease term, the lessee may purchase the equipment at a minimal value per piece of equipment. The key identifiable feature of a direct lease is the acquisition of the new equipment. (18,26)

Sale Leaseback

This type of lease occurs when a firm sells an asset it already owns to another party (a bank) and then leases it back; the firm changes from a seller to a lessee. In this way, the firm can obtain cash (proceeds from sale) and still have use of the asset. By the end of the lease term, the investment in the asset has been fully recovered and the lessee obtains title ownership once again by exercising a minimal option to purchase. (7,9,11,17,18,26)

Vendor Lease Financing

This type of lease is designed around three parties; the end-user (lessee), the vendor of the equipment (lessor or assignor), and the bank (lessor or assignee). Assignor is the party transferring its rights and obligations in a transaction to another party who is the assignee. A lease contract is signed between the

end-user and the vendor for a piece of equipment, the vendor is interested in selling this contract and realizing a 'cash sale'. The bank purchases the contract and the vendor assigns all of his rights in the contract to the bank. (18)

The benefit of leasing to banks

In Saudi Arabia, leasing product provides the following benefits to banks:

- Leasing the product is Islamically acceptable and appropriate. Since leasing earns rental income and is not an interest bearing facility, therefore, the issue of interest charges is not present in legal circumstances which strengthens the position of banks.

- In leasing, the bank owns the equipment and thereby the bank may be able to repossess the equipment. Proceeds from the sale of equipment can be placed towards recovering outstanding debts on defaults.

- Leasing is a new product in the Kingdom and can improve banks market penetration. (18)

2.3.1.4 The Issuance of Documentary Letter of Credits by Banks in Saudi Arabia

A documentary letter of credit can be described as a compromise (arranged by banks) to bridge the conflicting problems in trading transactions between buyer and seller, namely, that the buyer (in our case the contractor) desires to receive the goods

(either construction materials or equipment) he has ordered in good condition before a stipulated date and may be granted appropriate time to pay for them. On the other hand, the seller (exporter) wants to ensure that the goods he is selling will be paid for and he will receive payment as soon as possible. By establishing a documentary letter of credit, the above needs of both seller and buyer can be provided. (1)

Parties Involved in the Documentary Letter of Credit

There are four main parties involved in the establishment of documentary letter of credit. The applicant (importer or buyer), the issuing bank (importer's or buyer's bank), the beneficiary (seller or exporter) and the advising or confirming bank (the bank in the seller's country).

The Procedure of Establishing a Documentary Letter of Credit

The applicant requests his own bank, the issuing bank, to issue the credit in favor of the beneficiary. To do this, the applicant completes an application form to open this documentary L/C. This application contains the full terms and conditions under which the beneficiary will receive payment, type of L/C, method of reimbursement by the applicant, details of the documents required in evidence of the transaction which must be presented to the issuing bank and by which the importer can receive his goods such as the bill of lading and shipment insurance and description of the goods including details of the quantity and unit price. The form will be signed by the applicant, who by doing so, agrees to the

various conditions indicated on the application form. The issuing bank will then send the signed letter of credit to the advising bank, the advising bank in turn informs the beneficiary. The beneficiary will then make the shipment of goods and will receive the payment from the advising bank. (1,21)

Forms of Documentary Letter of Credit

There are several forms of L/C used in the Kingdom. These forms are called recoverable, confirming, revolving and transferable. In all of these types, payments by the applicant can be either acceptance, sight or refinancing method, depending on the agreement between the issuing bank and the buyer.

The Recoverable and Irrecoverable Documentary L/C

A credit may be recoverable or irrecoverable. Under the recoverable letter of credit, the credit can be cancelled or revoked either upon request of the applicant, or where the issuing bank considers that it will not be possible to obtain reimbursement from its customer; in the later case, it is clearly prudent for the issuing bank to revoke the credit in its own interest. This type of credit is risky for the beneficiary. On the other hand, irrecoverable credits cannot be cancelled, revoked or modified without the prior agreement of parties involved. Also, an irrevocable credit constitutes a definite undertaking by the issuing bank, provided that the terms and conditions of the credit are complied with as stated in the credit form. (1,21)

The Confirming Letter of Credit

This type of credit is sometimes required by the beneficiary from the importer. Under this credit, the advising bank does undertake to make payment against correctly tendered documents to the buyer. This action is called confirming. (1,21).

The Revolving Credits

Credits may revolve in two ways, around time or around value. A credit may be established for a fixed sum, say, SR:50,000 and is valid for may be one month on a revolving basis. If the SR:50,000 is not fully used during the first month, the credit will automatically be extended for another month, and so on until the credit is used up or cancelled. Another type of revolving credit may be established for a fixed period of time, say, six months, in the sum of perhaps, SR:100,000 revolving. Documents up to the value of SR:100,000 may be presented as often as the beneficiary wishes, until the credit expires at the end of six months. This type of credit is not often used by contractors, but by traders who require a lot of goods regularly. This type of credit is risky for the banks and not easily approved by them. (1,21)

Transferable Credits

This is an irrevocable letter of credit, but in addition, the beneficiary can transfer the issued credit to another beneficiary again. The beneficiary will act as a bridge between the buyer and the exporter. So, the first beneficiary will buy the goods from

the exporter and send them to the buyer (importer). This type of credit must be approved by the buyer (the applicant), and must be stated in the credit form that this credit is transferable. (1,21)

Reimbursement of Documentary Letter of Credit

This section is very important, because it tells the method in which the importer will reimburse the bank (issuing bank) and the way of financing these issued credits. The importer's method of financing depends on his financial condition. There are three methods of reimbursement as follows.

Sight Documentary Letter of Credit

Sight documentary letter of credit means that, the importer will make payment to the issuing bank for the value of credit (value of the imported goods) as soon as the issuing bank receives the documents required in evidence of the transaction and after checking them to see if they agree with the requirements as written in the credit form. (1,21)

Acceptance Letter of Credit

In this type of credit, the importer will make payment for the issued credit after 30, 60, 90 or 120 days from the date of receiving the documents by the issuing bank. (1,21,26).

Refinancing Documentary Letter of Credit

In this type of credit, the issuing bank will finance the required credit value for the importer (applicant) as soon as the

credit documents are presented to the issuing bank. This financing is considered as a short-term loan made to the importer. The importer has to pay back his bank loan (refinancing) in a period of not more than 90 days, at maximum. (1,26)

Fee for Issuing Documentary Letter of Credits

Saudi Arabian Monetary Agency (SAMA) regulates the fees (commission) for the issuance of the documentary letter of credit as follows :

- 0.25% up to SR:400,000 or equal for the period of three months.
- 0.125% for the amount over the first SR:400,000 for the period of three months.
- 0.0625% for every month over the first three months.

Banks also may take cash margins as securities for the issuance of the documentary letter of credits. (26)

2.3.1.5 Hedging Services by Commercial Banks and Their Application by Contractors

Hedging services aim to reduce the risk involved due to money fluctuations. The value of the Saudi Riyal versus US dollars and European currencies has fluctuated considerably since later 1978. And as an impact of these fluctuations, hedging services have become more and more interesting to contractors. For example, a contractor signs a lump sum contract in Saudi Riyals,

and has to import a lot of needed material and equipment from outside the Kingdom which must be paid for in foreign currency, say, US dollars. If a procurement is needed, say, after three months, then the contractor will be charged at the value of the US dollar at that time but if he hedges he will pay at the current rate even if the Saudi Riyal is devalued during these three months. Accordingly, lack of hedging will lead to a loss by the contractor due to the change of the price of US dollar versus the Saudi Riyal. From the above example, we can conclude that, if the contractor hedged himself, then he could protect himself against this devaluation of Saudi Riyal. (26)

Types of Hedging Services Used by the Contractors in Saudi Arabia

There are two types of hedging services usually used by the contractors in Saudi Arabia. These services are provided mostly by commercial banks. The types are: forward transactions, and foreign exchange options (FX options) (26). To explain these two types of hedging services, the researcher will illustrate the following example :

Example on Forward Transactions and FX Options

Let us suppose a Saudi Arabian importer needs to pay $10 million in six months' time. He is afraid of a possible devaluation and wants to be insured by hedging.

Hedging by Forward Transaction

Any foreign exchange transaction for settlement beyond 7

days is booked as a forward transaction, the solution of the above example if the importer uses the forward transaction is as follows :

Spot rate (the rate of US ^{3} recently)	3.7500
Swap pips	0.0400
Total	3.7900

If the devaluation of SR does not occur, the importer is bound to take the US dollar at 3.79, even if the prevailing spot rate is still 3.75. In this case, the loss to the importer will be SR:0.04 in each US dollar. But if devaluation occurs, say, the US ^{3} = SR:4.00, then the importer, by using forward transaction has protected himself and he will pay only3.79 per US dollar.

Hedging by FX Options

Foreign exchange options are similar to forward transactions with one major difference, namely, that the importer has the right to exercise an option as opposed to forwards where the importer is forced to exercise the transaction. The solution of the above example if the importer uses the FX options is as follows :

Spot rate	=	SR:3.75
Swap pips	=	SR:0.04
Total	=	SR:3.79

If the devaluation of SR does not occur, then the importer will let the option lapse and buys the US dollar at the prevailing rate of 3.75. But if the devaluation occurs, then the importer will pay the US dollars at 3.79. Buyers of FX options are subjected to pay a fee for the right to exercise an option, the up-front-fee is quoted as a flat per cent of the amount involved. In this case, the importer will have no loss except the up front fee. The up-front-fee is determined by several factors such as : (1) the currency concerned, (2) tenure (term) of the option, (3) volatility on the exchange market, and (4) whether the strike prices is in/at/out-the-money (this factor depends on the strike price which stands for the contractual exchange rate at which the currencies will be exchanged if the option is exercised). In-the-money means that the strike price is better than the prevailing market rate. At-the-money means that strike price is the same as market rate. Out-of-the-money means that the strike price is worse than the prevailing market rate. (26)

2.3.1.6 Financing by Syndication

Saudi Arabian Monetary Agency (SAMA) limits the credit at which each bank can provide to its customers to no more than 25% of the bank's capital plus reserve. For example, if a contractor needs to provide a performance bond for a very big project, the

above limitation and the risk involved to banks altogether lead to the use of syndicate financing. Financing by syndication means that a group of commercial banks participate in the issuance of a large financial facility. This syndicate enable banks to spread their risk, avoiding too much exposure to any individual borrower or project and lending to a wider spectrum of different borrowers than could be handled alone. (27,28)

Parties Involved in Syndication Financing

In syndication financing, there are several parties involved, the leading manager(s), the agent, the co-manager and the providing group.

The Leading Manager

The leading manager is the bank who receives the needed financial facilities request from the clients (the ones who are in need for financial facilities). The leading manager can be one bank or more than one bank (co-leading managers). The main job of leading managers is to analyze the client and his financial request thoroughly to obtain all needed information. This information will be used to determine if the client's financial request is sound and fits his portfolio or not. If the leading manager agrees to take the client's financial request over, then this leading manager will make contacts to other banks to share this financial request to build up a syndicated facility. Then the leading manager will receive approvals from all interested banks. The leading manager will give mandates on how to deal with this syndicated

facility to all other participating banks. (26,28)

The Agent

If there is one leading manager then this leading manager will be the agent at the same time. But if there are co-leading managers, then the agent must be one of them. The responsibilities of the agent are as follows :

- He issues notices of drawdown and collects funds from the syndicate for payment to the borrower, sets the interest rate by the agreed method plus calculates and collects the interest and repayments of principal for distribution to the participants.

- He checks the provisions of the original collateral and updates valuations and procures the delivery of any additional collateral necessary to maintain cover.

- He also monitors all appropriate items which are included in the agreement, such as delivery of annual and interim reports and the receipt of certificates of compliance from the client (borrower). (26,28)

The Co-Manager

Helps the leading manager in all his duties.

The Providing Group

Consists of all banks participating inthe syndicate, including

all of the above parties.

An Actual Case of a Syndicated Financial Facility to a Contractor in Saudi Arabia

This case is a syndicated guarantee and working capital facility for SAMHO Construction International Company Limited for the construction of the housing project for National Guard Military Staff at Al-Hassa. The amount of this syndicate is US $279,500,000. This syndicate was managed by Arab African International Bank Al-Bahrain, Arab African Bank, Arab Asian Bank, Arab Banking Corporation (ABC), Bank of America International Group and Saudi American Bank. This syndicate was co-managed by the Bank of Bahrain and Kuwait. It was provided by :

Bank of America

Arab Asian Bank

Arab Banking Corporation

Al-Bahrain Arab African Bank

Saudi American Bank

Bank of Bahrain and Kuwait

Arab African International Bank

The Commercial Bank of Kuwait

Credit Lyonnais

Kuwait Foreign Trading Contracting and Investment Co.

The Bank of Kuwait and Middle East

United Gulf Bank

Banque National de Paris

Kuwait Real Estate Bank

The Agent is Saudi American Bank.

A summary of this syndicate financial facilities is provided in A Table 2.5.

Remarks on the Syndicate Financing Case

- From the listed financial facilities, one can notice that some of these facilities are issued by the agent (SAMBA) and some of them are issued by all of the participating banks. When one bank issued any facility alone, this bank will get in return an issuance fee and will be counter indemnified by the rest of the participating banks except for his share in that facility.

- Commission fee and interest rates are distributed among all participating banks.

- One can notice the role of the agent in the letter of credits and the program payment financing (facilities at 4, 5 and 6).

- The contract amount for that project was US $490,000,000. Total amount of the syndicated financial facilities from banks is $291,500,000, of which a maximum of $212,500,000 will be outstanding at any one time.

TABLE (2.5)

A summary of financial facilities syndicate for the housing of National Guard Military Staff at Al-Hassa Project is as follows:

Facility	Total Amount $ MM	Security/Support	Issuance/Booking Structure	Pricing
Performance Gtee	24.5	Cho Heung Bank G'tee	100% issuance by SAMBA against counter indemnity of syndicate banks	Issuance Fee: 1/8% p.a. Commission : 5/8% p.a.
Advance Payment Guarantee	98	Cho Heung Bank G'tee	Several issuance by participating banks.	Commission : 5/8% p.a.
Retention money Guarantee*	49	100% cash	100% issuance by SAMBA against counter-indemnity of syndicate banks.	Issuance Fee: 1/8% p.a. Commission : 5/8% p.a.
Revolving L/C	50	Assignment of Contract Proceeds	L/C's will be opened by SAMBA and will be counter indemnified by participating banks	Issuance Fee: 2 per mille Commission : 1/4% p.q. 1/12% -.m. for extension.
L/C Refinancing	30	Assignment of Contract Proceed	SAMBA will fund and book all advances made and will be counter indemnified by participating banks.	Interest Rate: SAMBA Prime + 1% p.a. Commitment Fee: 1/4% p.a.
Progress Payment	20	Assignment of Contract Proceeds	SAMBA will fund and book all advances made and will be counter indemnified by participating banks.	Interest Rate: SAMBA Prime + 1% p.a. Commitment Fee: 1/4% p.a.
Medium Term Working Capital Loan	20	Assignment of Contract Proceeds	Each participating bank is required to fund its portion of any drawings.	Interest Rate: SAMBA Prime + 1 1/1% p.a. Commitment Fee: 1/2% p.a.
	212.5			

- All types of security will be discussed in the following section.

2.3.2 The Relationship of Commercial Banks and Contractors

Commercial banks provide, as we saw, several financial services to contractors. Therefore, it is necessary for the contractor who deals with banks to establish a close and permanent relationship with them. In order to get the most benefits from such a relationship, contractors should cooperate with them and provide them with the required information regarding their business.

2.3.2.1 Types of Information Required from the Contractors for Obtaining Financial Facilities from Commercial Banks

In order to determine the contractor's financial soundness and his capability, commercial banks may require the following types of information :

1. Information about the contractor's financial strength and needs. This type of information may include the following :

   a. Balance sheet and income statements.

   b. Cash flow, indicating withdrawal and payment schedule.

   c. Summary of proposed financial needs with attached securities.

d. Contractor's future business plans (diversion of funds).

e. A list of value of work already in progress.

2. Information about the contractor's technical capability and information regarding the project at hand. This type of information may include the following :

a. Prequalification documents, which include all of the background and history of the contractor Also, it includes a history of his staff, especially the key personnel, a list of all owned equipment, and a list of all projects executed by him.

b. Description of the proposed work which will be executed by the contractor and in which he will be using the proposed financial facility from the bank.

c. Complete contract drawings and specifications including special conditions.

d. Contract agreement.

e. Sub-contract agreement.

f. Construction schedule of and program.

2.3.2.2 Types of Securities Required from Contractors to Commercial Banks

Banks also may require some securities from contractors for issuing to them the needed financial facilities. These types of securities are as follows :

a. Acceptable bank counter-guarantees: This type of security is usually required from foreign contractors where they need financial facilities from domestic banks in Saudi Arabia. In this case, domestic banks may require a guarantee from the foreign contractor's bank (the bank with whom he is dealing with his country) to cover most of his exposure with them. So, in case of any default of payments from this foreign contractor, the domestic bank will be indemnified by the foreign contractor's bank by this bank's counter guarantees.

b. Corporate letter of guarantee: This type of security may also be required from foreign contractors, but this security is provided from the mother company in the contractor's country. By this security, the mother company will be responsible for the working contractor.

c. Assignment of contract proceeds, acknowledgement of assignment: This type of security is provided by the contractor to the bank with which he is dealing. By this type of security, any payments from the owner of the project to the contractor, must be deposited in the contractor's account in the bank and not handed to him directly. The owner gets informed by this security through the acknowledgement of assignment which must be presented to the bank.

d. Personal guarantees: This type of security is usually done with joint venture contractors, where there is a Saudi partner and a foreign partner. The Saudi partner will be acting as a guarantor to the bank for any defaults of payment sent from this joint venture construction company.

e. Asset for collateral: A bank may accept some of the contractors assets as a security against the financial facility provided to him. These assets are such as land deeds and equipment.

f. Cash margin: This is a cash sum the contractor must deposit in the bank with which he is dealing. This cash will be blocked (not increasing or decreasing and the contractor cannot withdraw any of it). This cash margin will be used as security against any possible defaults in payment from the contractor. The amount of this cash margin depends on the contractor's exposure (amount needed).

Finally, it is important for the contractor to maintain an existing good relationship with the banks. For this purpose, he should keep is commitments, not exceed the time of credit limits and be prompt in his repayments. He should provide the bank with the required periodical financial statements. He should not add new loans from other sources without the bank's consent and periodically discuss his financial needs with his banker. Also, a contractor who deals with banks should try to maintain or increase his profit otherwise, the bank's financial facilities may be cancelled

on the grounds of indicated poor management performance. Liquidity should not be decreased, because banks perceive such a development as a potential threat to the repayment of loans.

The following chapter will specify exactly the applications of financial facilities by contractors in the Eastern Province of Saudi Arabia.

CHAPTER 3

THE APPLICATION OF FINANCIAL FACILITIES BY CONTRACTORS IN THE EASTERN PROVINCE OF SAUDI ARABIA

The previous chapter discussed the contractors's cash flow, various types of financial requirements to contractors and financial facilities provided by commercial banks to contractors in Saudi Arabia. This chapter will cover the applications of the mentioned financial problems faced by them in the Eastern Province of Saudi Arabia.

The following section will explain the methodology the researcher used to reach the above objective.

3.1 Methodology of the survey:

This section covers the following parts: the objective of the survey, the chosen sample, the questionnaire used in the survey (its development and contents), and the difficulties faced by the researcher in carrying out the survey.

3.1.1 THE OBJECTIVE OF THE SURVEY

The previous discussions of financial facilities and requirements regarding construction industry are mostly from the point of view

of commercial banks (the researcher made detailed interviews with the following five commercial banks; Saudi American Bank, Saudi French Bank, Saudi Investment Bank, Saudi British Bank and the Saudi National Commercial Bank) and form a literature reviews regarding construction financing.

To focus on complete picture of construction financing in Saudi Arabia, from the point of view of the contractors, the aspects of construction financing and the associated financial problems, as experienced by the contractors, must be brought to light. Keeping in view the above objective, questionnaire that conveys most aspects of construction financing which may be used by contractors was developed to specify exactly which of these financial facilities are mostly applied and how they were applied, the difficulties associated with their applications and finally to highlight major financial problems faced by contractors.

3.1.2 THE INTERVIEWER CONTRACTORS' SAMPLE

The following steps were followed to choose the sample of interviewing contractors.

1. Samples of different contractors were collected from the five commercial banks metioned above.

2. Small contractors whose average annual volume of work measured in Saudi Arabian Riyals is less than 30 million were eliminated from the sample, and only large contractors were considered suitable for this survey.

3. The intend was to make interviews with different classifications of contractors because the researcher needs to know the effects of various types of works (classifications) on financial facilities provided by the commercial banks.

4. Then personal interviews with different contractors were conducted.

5. After interviewing a sample of 16 contractors, the researcher realized that the information has started repeating. However, the researcher did not stop interviews and completed his survey when he reached a sample of 20 contractors covering the following classifications:

4	Building contractors
2	Roads contractors
2	Water and sewage contractors
2	Electrical contractor
1	Mechanical Contractor
2	Industrial contractors
1	Operations and Maintenance contractors
6	General contractors
20	Total

6. This survey was conducted to see how different financial facilities are availed by the various classification of contractors and to find out the real problems faced by these contrac-

tors currently in Saudi Arabia

3.1.3 THE QUESTIONNAIRE

3.1.3.1 Development of the Questionnaire

The questionnaire was developed as follows:

1. From literature reviews and instructions from some commercial banks (especially SAMBA), the researcher developed the first trial of the questionnaire (appendix B).

2. The preliminary questionnaire was supplied to three contractors personally to get their opinions.

3. Based on the feedback received from the three contractors, an amended questionnaire was prepared and was supplied to a fourth contractor who expressed that the questionnaire covered almost all aspects of the construction financing.

4. The questionnaire was finally submitted to the thesis committee chairman and later on was finally drafted after incorporating the suggestions of the Thesis Chairman (Appendix C).

3.1.3.2 The Contents of the Questionnaire

The questionnaire is comprised of eleven questions which cover most aspects of construction financing. The following is an explanation of each question and its significance.

QUESTION # : 1: Contractor's Classification

This question specifies the contractor classification. In the Saudi classification list, there are eleven types (classifications) of works in the construction industry. these are; building, roads, water and sewage system, electrical works, mechanical works, industrial works, marine works, well drilling, operation and maintenance, dams and general contracting. The significance behind choosing various types of contractors, rather than one specific kind, is to see the effects of different types of works on the financial services provided by commercial banks and to see if they act differently against these classifications.

QUESTION # : 2: Approximate SR amount per year of construction contracts

This question is to indicate approximately the average amount of yearly construction work measured in Saudi Riyals, in which the contractor has been involved in working during the last six years. The significance of this question is to see the impact of this average amount ot the financial facilities provided by commercial banks.

QUESTION # 3 : Source of Contractor Financing

This question is to indicate what sources of construction financing are frequently utilized by contractors frequently. Also, to specify if there is other than the listed sources being utilized. The listed sources of financing in the questionnaire were: (1) the contractor's equity, (2) owner's progress payments, (3) commercial banks, (4) syndication, and (5) others, please specify.

QUESTION # 4 : Types of Contractor Financial Services Provided

by Lender

This question covers most financial facilities which are provided by commercial banks. These financial facilities are: contract bonds, loans, documentary letter of credit and leasing.

A. Contract Bonds

Under this type of bonds, the following types of bonds are covered.

A.1 Bind Bonds: Under this type of bonds, the researcher asked several questions as follows: - Percent of contracts that required this bond?
0-25%, 26-50%, 51-75%, 76-100%.

The significance behind this question is to know whether the bid bond is frequently utilized and required from contractors. For example, if a contractor circles the 100% range, this will indicate that this financial facility was required in all of the contractor's previous contracts.

- Percent of contract price (face value of this bond)? 1%, 2%, please specify.

The significance behind this question is to specify exactly what is the value of this bond as a percentage of contract value.

- Range of cost (commission) of this bond? 0.25-0.50%, 0.51-0.75%,0.76-1%,1.01-1.25%, 1.26-1.75%, 1.76-2% (as percentage of bond face value).

The significance of this question is to determine the ranges of the amount of fees taken by banks from contractors for the issueing of bid bond.

- Percent of cash margin as percentage of bond face value. 0-5%, 6-10% 11-15%, 16-20%, 21-25%, 26-30%, 31-40%, 41-50%, 51-100%.

The significance of this question is to determine the ranges of cash margins taken by banks from contractors for the issuing of bid bonds.

Note: At the end of each section of questions, there will be a discussion part in which different issues will be raised regarding each section alone.

A.2 Performance Bonds

Questions asked about the performance bonds are the same as asked for the bid bonds, but there was a little difference in answers on the ranges. The significance of this group of questions is to specify how performance bonds are applied.

A.3 Advance Payment Bonds

Also here, the questions related to Advance Payment Bonds are the same as those for bid bonds, but with a little difference in the ranges of some questions.

Note: The same criterion was followed for Retention and Payment Bonds.

B. Loans

This part of question four covers most types of loans which are provided by commercial banks to contractors/ The significance of this part is to realize which types of loans are mostly utilized by contractors and how they are applied. Types of loans which are listed in this pat are as follows:

- Short term Loans
    - Progress payment financing (PPF)
    - Overdraft (line of credit)
    - Short loans
- Term loans
- Long term loans

In the discussion of this part, various aspects of these types of loans are covered which include interest rates on loans, periods of loans and paying off of these loans.

C. Documentary Letter of Credit (L/C)

The significance of this part is to know how and when contractors pay off their issued (L/C) to their issuing banks. There are three ways listed in this regard, as discussed previously in the second chapter. These are as follows:

- By acceptance
- By sight
- By refinancing L/C

The discussion in this part covers detailed aspects of the above L/C's types.

D. Leasing

This part is regarding the leasing facility. The significance of this part in the questionnaire is to know which types of leasing facility is most utilized by contractors and how it is applied. The types of listed leasing facilities are as follows:

- Operating lease
- Financial lease
    - Direct lease
    - Sale lease back
    - Vendor lease

QUESTION # 5 : Types of Security Usually Provided to Lender for Credit Facilities

This question covers most of the financial securities that may be required by banks for contractors. The significance of this question is to specify exactly what types of securities are mostly provided by the contractors to the commercial banks in Saudi Arabia The following are the listed possible financial securities.

- Acceptable bank counter guarantee.
- Corporate letter of guarantee
- Assignment of contract proceeds, acknowledgement of assignment
- Asset for collateral
- CAsh margins
- Others, please specify.

QUESTION # 6 : List of Requirements for Obtaining Financial Ser-

vices from Lenders

The significance of this question is to specify exactly what types of information is usually needed by commercial banks from contractors. A list of possible different types of information is as follows.

- Description of proposed work
- Prequalification document
- List of value of work already in progress
- Balance sheet and income statements for a few previous years.
- Cash flows indicating withdrawal and payment schedules
- Complete contract drawings
- Specifications including special conditions
- Contract agreement
- Construction schedule and program
- Summary of proposed financial needs with attached possible securitie
- Contractor's future business plans (diversion of funds)
- A guaranteeing bank
- Others, please specify

QUESTION # 7: Owners' Requirements form the Contractor to Receive Final Payment/Retention

The significance of this question is to specify exactly the requirements from contractors to owners, so that by receiving these requirements, owners will release final payments/retentions to contractors. The following are the listed requirements.

- Zakat and income tax certificate
  - For foreign contractor percent of profit = 25%, 35%, 40%, 45%.
  - For Saudi contractor percent of net worth = 2.5%
- Certificate of completion
- Visa clearance certificate
- Others, please specify

QUESTION # 8 : Please Indicate Major Financial Problems Faced While Working in Saudi Arabia

This question is very important because it will give an idea about what sort of financial problems are really faced by contractors in Saudi Arabia Examples of some possible problems are given. The contractor might give other than the listed problems, but any way he should rank his response as indicated by the given rating system.

A = Very serious (significant delay and/or cost increase)

B = Serious (small delay and/or cost increase)

C = Irritating (small delay and/or little cost increase)

QUESTION # 9 : Types of Penalties

The significance of this question is to specify exactly the possible types of financial penalties which are exercised by owners against contractors and they way in which these types are applied in reality.

QUESTION # 10: Proposed Alternative Ways of Contractor financing

The significance of this question is to make contractors contribute in the developing of their financing system by proposing any new alternative ways of construction financing.

QUESTION # 11: Anticipated Difficulties for the above Alternatives

This question is an extension of question 10! If contractors propose any alternatives, they should also mention any anticipated difficulties arising out of these alternatives. Form the suggested alternatives one can remedy the current problems faced by the contractors.

3.1.4 DIFFICULTIES FACED BY THE RESEARCHER WHILE DOING THE SURVEY

The purpose of this section is to elaborate on the difficulties faced in the course of this survey in order for future researchers to avoid them as much as possible. The difficulties are:

- This topic is very critical for the contractors because the information regarding financing will tell about the contractor's policy,

especially during the current challenging and competitive environment in Saudi Arabia A confidence between the researcher and the contractor must be established by persuading the contractor that though the information may be included in the thesis, the names of the contractors will be kept absolutely confidential.

- Information from commercial banks is difficult to obtain because all banks deal with their clients in a total confidential atmosphere. In addition, the personnel in the commercial banks are normally busy in their routine work and it is very hard to get appointments with them for research purpose. To avoid problems, the future researcher should try, as much as possible, to have a formal introduction to bank personnel through a mutual friend who can help in persuading the bank to cooperate with the researcher.

- For engineers, the financial terms are difficult to understand, therefore, the future researcher should orient himself fully with the financial terminology used by the bankers and the contractors: this will help tremendously in conducting efficient interviews. The researcher needs to talk to the financial managers in the contracting firms which are stationed in the firm's headquarters offices.

3.2 ANALYSIS AND DISCUSSION OF THE SURVEY RESULTS

This section describes the way in which the data of the questionnaire has been analyzed and a discussion of the analysis.

3.2.1 Analysis of the Data

The data of the questionnaire responses has been analyzed by both computer using the Statistical Analysis System (SAS), and manually. All types of bonds and their relations to contractor classifications and contractor financial ability (annual average value of work) has been analyzed by using the SAS program on the IBM computer. The rest of the data has been analyzed by using conventional manual method.

3.2.2 Discussions of the Results of the Survey

The results of the analysis have been discussed in division, each division discussing different financial issues with respect to both contractor's classifications and their financial ability (depending on their average annual value of work). These divisions are as follows:

A. CONTRACTORS CLASSIFICATIONS

Table (3.1) shows contractors classifications and their frequencies. From an overview of the table one can conclude that third of the sample is identified as general contracting contracts. This is because most of the big contractors are classified as general contractors.

Table 3.1

Contractors Classifications

	Frequency	Percent
Building	4	20
Roads	2	10
Water and Sewage	2	10
Electrical	2	10
Mechanical	1	5
Industrial	2	10
Operations & Maintenance	1	5
General Contracting	6	30

B. CONTRACTORS AVERAGE ANNUAL VALUE OF WORK

Referring to Table (3.2) below which shows the ranges of contractors annual value of work, it is established that 80% of the contractors are falling above SR 50 million in their annual value of work.

Table 3.2

Average Amounts of Yearly Construction Work Measure in Saudi Riyals

Million SR	Frequency	Percent
< 50	4	20
50 - 100	10	50
100 - 200	3	15
200 - 300	2	10
> 300	1	5

C. SOURCES OF CONTRACTORS'S FINANCING

The respondents have indicated the following sources of financing in Saudi Arabia:

C.1 Financing from Owners

Financing by owners of the projects, which are mainly represented by advance payments, and progress payments is considered one of the main sources of contractor financing in Saudi Arabia Retention policies and delays in progress payments are some of the main reasons that contractors tend to seek other forms of financing. Also, this tendency has been increased, especially when advance payments percentage was reduced from 20% to 10 % of contract price (even this is

rarely given currently).

C.2 : The respondents declared that the second important source of financing is form commercial banks. This source will be discussed in detail in Section D.

C.3 : Contractors are always trying as much as possible, not to use their own capital and retained earnings for financing the construction activities in their projects, but the strong restrictions which are applied by commercial banks, make contractors (specially those with low financial strength) to depend more on their own financial resources to meet their financial needs. In contrast, contractors with high financial strength are depending more on commercial banks for their financial needs. The analysis of the data of the questionnaire shows that contractors with low annual average value of work are meeting between 30-50% of their financial needs from their own financial resources. On the other hand, contractors with high average annual value of work (more than 100 millions) are meeting 10-20 per cent of their financial needs from their own financial resources, which means that they are depending more on commercial banks.

C.4 : Financing by syndicated facilities form different commercial banks is used by large contractors and for big contracts only.

C.5 : Some of the contractors declared that the purchasing of materials and equipment on credit from vendors is consid-

ered one of the main sources of financial aid to contractors by doing so, contractors can get their procurement immediately but pay for it at a later stage.

D. FINANCIAL FACILITIES PROVIDED BY LENDERS TO CONTRACTORS

The data shows that all financial facilities which are needed by the contractors are mainly provided by commercial banks. The following discussion explains how these financial facilities are applied in practice by contractors.

D.1 : Bonds

The result of the data showed that the following types of bonds are the only type of bonds which are utilized by contractors in Saudi Arabia

D.1.1 Bid Bonds

(Refer to SAS results in Table 3.3)

Bid bonds are required in all government open bid projects and are mostly issued from commercial banks. In contrast, projects for semi government projects (like Aramco) do not require bid bonds. The value of this bond is 1% of the contract price. But in practice the value of this bond is slightly greater than 1% (just for security purposes), so that the exact bid price will not be known by his banker prior to bid closing. However, strictly speaking, the value of this bond in any case should not be less than 1% of the contract price. The value of this bond rarely reaches 2% of the

Table (3.3)

Responess on bid bonds

(1) % of contracts no. That required bid bonds

Usage range (%)	Frequency	Percent
0 - 25	3	16
26 - 50	1	5
51 - 75	3	16
76 -100	12	63

(2) Face value of bid bond as percentage of contract price

Face value (%)	Frequency	Percent
1	19	100

(3) Range of commissions of bid bonds as percentage of bond face value

Commission(%)	Frequency	Percent
0.25 - 0.50	11	58
0.51 - 0.75	6	32
0.76 - 1.00	2	10
1.01 - 1.25	0	-

(4) % of cash margins as Percentage of bid bond face value

Cash Margins (%)	Frequency	Percent
0 - 5	5	26
6 - 10	4	21
11 - 15	6	32
16 - 20	1	5
21 - 25	3	16

contract price (this may happen in private sector contracts).

About 90% of the respondents declared that the annual commissions (cost of the bond) which are taken by commercial banks for issuing of bid bonds are falling in the 0.25% to 0.75% range (as percentage of bond value), but with the majority in the 0.25% to 0.50% range. SAMA regulates the yearly bonds commissions to 0.25% of bond value for the first 10 million, and 0.125% over the first SR10 million.

From the collected data, one can notice that there are some commissions greater than the regulated 0.25% of bond value by SAMA. Contractors said that banks, in order to cover their risks and administration costs charge greater than the regulated commissions and in return they reduce their cash margins which are taken as securities form the contractors.

Cash margins, which are taken by commercial banks as security form contractors for providing them with bid bonds, depend on both contractor classification, and financial strength. About 80% of the results shows that each margin is falling in the 0-15% range as percentage of bond value and reaching at 25% maximum. For specialized contractors like water and sewage, electrical, mechanical and industrial etc., these cash margins are reduced to no more than 10% of bond value.

The analysis of the data also shows that cash margins for

contractors with high average annual value of work of over SR100 million are falling in the 0-10 percent range. The rest, which are falling in the 50-100 million annual average value of work range, are having cash margins mostly in the 11-15 percent range.

From the discussions on the bid bonds, the following remarks are concluded.

The term of bid bonds is 90 days and most of these bonds are of the liquidated type but a few are difference-of price types. Bid bonds are cancelled for all contractors who fail in getting the awared of the contract except for the three lowest responsible bidders. If the successful bidder furnished all the required other bonds then the rest of the bid bonds for the second and third successful bidders will be cancelled. Some of the bid bonds are cancelled if the owner discovers that the value of the bond is less than 1% of the contract price and this is done without any mistake.

D.1.2 Performance Bonds

(Refer to SAS results in Table 3.4)

Performance bonds are required in most government and semi-government projects. The value of this bonds in governmental projects is not less than 5% of the contract price. But for semi-governmental projects, it's value is 10% of the contract price.

Table (3.4)

Responess on Performance Bonds (p.b)

(1) % of contracts no. That required (p.b)

Usage range	Frequency	Percent
0 - 25	0	0
26 - 50	0	0
51 - 75	4	20
76 -100	16	80

(2) Face value of (p.b) as percentage of contract price

Face value (%)	Frequency	Percent
5	12	60
10	8	40

(3) Range of commissions of (p.b) as percentage of bond face value

Commission(%)	Frequency	Percent
0.25 - 0.50	12	60
0.51 - 0.75	5	25
0.76 - 1.00	2	10
1.01 - 1.25	1	05

(4) % of cash margins as Percentage of bond face value

Cash Margins (%)	Frequency	Percent
0 - 5	6	30
6 - 10	4	20
11 - 15	7	35
16 - 20	1	5
21 - 25	1	5
26 - 30	1	5

Ranges of commissions which are charged by the commercial banks on the issuance of these bonds are the same as those in bid bonds. About 90% are falling in the 0.25-0.75 percent range.

Also, 85%, of the results show that cash margins which are taken by banks from contractors as securities are falling in the 0-15% range, as a percentage of bond value, reaching to 30% at a maximum.

For specialized contracts (water and sewage, electrical mechanical and industrial) cash margins are ranging form zero to 10%. Contracts prequalifications, their financial strength and the amounts of their bank commissions are affecting the amounts of cash margins which are blocked for the issuance of the performance bonds. The following table illustrates this from analyzing the cross tabulation in the SAS results.

Table 3.5

Contractor's average annual value of work range in million SR	Commission range charged by banks	Cash margins required by banks
<50	(0.25 - 1.00)%	6 - 30%
50 - 100	(0.25 - 1.00)%	0 - 15%
100 - 200	(0.25 - 0.75)%	0 - 10%
200 - 300	(0.25 - 0.50)%	0 - 10%
>300	(0.25 - 0.50)%	0 - 5%

Performance bonds expire at final acceptance which is usually one year after initial acceptance, covering the maintenance period. However, some of the projects require a two year maintenance period such as a landscape project. If a retention bond is provided by the contractor, then this retention bonds will swap the performance bond and in this case the performance bonds will expire at initial acceptance.

D.1.3 Advance Payment Bonds

(Refer to SAS Results in Table 3.6)

Advance payment bonds are always required by the owners and in return the owners offer advance payments to contractors. Results of the questionnaire show that only 50% of the respondents are utilizing advance payment bonds. In addition, the advance payments are rarely offered by the owners recently. The value of these bonds has been changed from 20% to 10% (percentage of the contract price). However, it has rarely reached 5%.

Ranges of commission which are taken by banks on the issuance of these bonds are the same as those in bid bonds. About 90% are falling in the 0.25-0.75 percent range with the majority in 0.25-0.5 percent range.

Cash margins range, which are blocked by commercial banks as securities for the issuance of advance payment

Table (3.6)

Responess on Advanec Payment bonds (a.p.b)

(1) % of contracts no. That required (a.p.b)

Usage range	Frequency	Percent
0 - 25	9	45
26 - 50	2	10
51 - 75	1	5
76 -100	8	40

(2) Face value of (a.p.b) as percentage of contract price

Face value (%)	Frequency	Percent
5	2	10
10	17	25
20	1	5

(3) Range of commissions of (a.p.b) as percentage of bond face value

Commission(%)	Frequency	Percent
0.25 - 0.50	13	65
0.51 - 0.75	5	85
0.76 - 1.00	1	5
1.01 - 1.25	1	5

(4) % of cash margins as Percentage of bond face value

Cash Margins (%)	Frequency	Percent
0 - 5	6	30
6 - I0	4	20
11 - 15	7	35
16 - 20	1	5
21 - 25	1	5
26 - 30	1	5

bonds, are the same as those of performance bonds.

Remarks on Advance Payments Bonds

The value of the advance payment bonds is reduced gradually as work progresses by discounting each monthly billings by 10% to 15% until the owner of the project recover the whole amount of the advance payment, at which stage the advance payment bonds have been terminated.

Banks in their turn will not reduce the values of these issued bonds until they receive letters of acknowledgement from beneficiaries of bonds. Banks accordingly reduce the amounts of commissions and cash margins, because these values are related to advance payment bonds values directly.

Advance payment bonds in some contracts are being discounted according to the terms of these contracts.

Terms of advance payment bonds are mostly 6 months and renewable at the end of each 6 months.

D.1.4 Retention Bonds

(Refer to SAS results in Table 3.7)

Results of the analysis of the data shows that retention bonds are only 30% utilized by the respondents. Owners (government and semi-government agencies) do apply retention policies on their progress payments to contractors but without requireing retention bonds (optional for contractors).

Table (3.7)

Responess on Retention bonds (R.b)

(1) % of contracts no. That required (R.b)

Usage range	Frequency	Percent
0 - 25 %	9	70
26 - 50 %	0	--
51 - 75 %	1	7
76 -100 %	3	23

(2) Face value of (R.b) as percentage of contract price

Face value (%)	Frequency	Percent
5 %	6	45
10 %	7	55

(3) Range of commissions of (R.b) as percentage of bond face value

Commission(%)	Frequency	Percent
0.25 - 0.50	6	46
0.51 - 0.75	5	38
0.76 - 1.00	1	8
1.01 - 1.25	1	8

(4) % of cash margins as % of R.b face value

Cash Margins (%)	Frequency	Percent
0 - 5	3	23
6 - 10	2	15
11 - 15	6	46
16 - 20	1	8
21 - 25	1	8

The value of this bond is motly 10% and rarely reaches 5% (as percentage of contract price).

Ranges of commissions which are taken by commercial banks on the issuance of these bonds are (85% falling in the 0.25-0.75 percent range with the majority in the 0.25-0.5 percent range.

The results also show 85% of the respondents declaring cash margins to fall in the 0-15 percent range with the majority in the 11-15 percent range, and reaching to 25 percent at a maximum. CAsh margins for specialized contractors are falling in the 0-10 percent range.

Cash margins are affected by a contractor's annual average value of work and commissions taken by banks. The following table shows the ranges of these cash margins with respect to both contractor's annual average value of work and banks commissions as indicated by the cross tabulation in SAS result below in Table 3.8.

Table 3.8

Contractor's average annual value of work range in million SR	Commission range charged by banks	Cash margins required by banks
< 50	(0.25 - 1.00)%	6 - 30%
50 - 100	(0.25 - 1.00)%	0 - 15%
100 - 200	(0.25 - 0.75)%	0 - 10%
200 - 300	(0.25 - 0.50)%	0 - 10%
> 300	(0.25 - 0.50)%	0 - 5%

Remarks on Retention Bonds

Retention bonds are rarely utilized in Saudi Arabia

Government agencies were applying retention policy on monthly progress payments bur recently this retention policy is changed. The new retention policy implies that contractors must get paid in full for their progress payments without any retainage, until the total amount of received progress payments reaches 90% of the contract price. After which the contractors will not get paid and the remaining 10% will be held as retainage.

Sometimes, if retention bonds are provided by contractors, these will replace performance bonds, and consequently these retention bonds will expire at the final acceptance.

On the other side of the coin, the retention bonds may expire at initial acceptance. In this case they will not replace performance bonds.

D.2 Loans

In this section all respondents results regarding the actually utilized types of loans will be analyzed.

D.2.1 Short Term Loans

Short term loans are the most utilized types of loans by contractors. This type of loan is mostly utilized to pay off material vendors, to get advantages from possible discounts and also to pay off labor and subcontractors. The following discussion will analyze the types of short loans, organized in descending order according to their utilization.

D.2.1.1 Short Loans

The term of this type of loan is mostly 3 months o4 6 months. Commissions (interest rates) which are charged by commercial banks for the issuance of this financial facility most fall in the 8-11 percent range which includes Bibor or Jibor plus spread. Most of short loans are paid off at maturity, but sometimes in an installment basis and mostly without discounting policy.

D.2.1.2 Line of Credit (Overdraft)

The term of this type of short loan is mostly one year (has to be cleaned every year), and sometimes it is renewable on a 6 months basis. Commissions on this type of short loan are calculated on a daily basis (prime + spread) and most fallen in the 9-13% range.

Contractors pay off this type of loan by paying off interest charges monthly on the utilized amount (the summation of all daily charges for each month) while the outstandings (the actual utilized amount form the line of the credit) are paid off at maturity. Commitment fees (fees on the no utilized portion of the line of credit) are applied rarely by a few banks.

D.2.1.3 Progress Payment Financing

This type of short term loan is utilized less by contractors in comparison to other forms of short term loans. Term of this loan is mostly 90 days and it is paid off at maturity. Commissions on this type of loans are the same as those of short loans.

D.2.2 Term Loans (Medium Term Loans)

Term loans are rarely utilized by contractors and the same time, they are not easily approved by the commercial banks. The term of this type of loan is usually 3 years. It is mostly utilized by contractors to purchase fixed assets like expensive equipment and to pay off short loans. Contractors mostly pay off for their medium term loans by installments, monthly or quarterly.

D.2.3 Long Term Loans

Long term loans are very rarely utilized by contractors in Saudi Arabia and are not provided by the local commercial banks. Some of the contractors get this financial facility form banks which are outside the Kingdom.

D.3 Letter of Credits (L/C)

Most of the respondents declared that sight letter of credits is the most utilized type among all types of letter of credits, followed by acceptance then refinancing letter of credits. But recently the later two types are increasingly exercised by contractors because they facilitate the contractor financially. Commercial banks require cash margins for refinancing letter of credit in the range of 5-10% mostly. Commissions which are taken by commercial banks on the issuance of these are bound by the regulations issued by SAMA.

Letter of credits are utilized by contractors, especially if their projects are material intensive and contractors are required to supply the items.

L/C's are not only utilized by the contractors for importing material form outside the Kingdom, but even for internal transactions (material purchase) within the Kingdom (from city to city or sometimes within one city).

D.4 Leasing Facilities

The respondents results show that leasing facility is very rarely utilized by contractors. In a few cases operating leases were used. The reasons behind this is an follows:

1. In the past, about 7 years ago, governmental agencies (ministries) were asserting a first lien against machinery and other real assets which were employed by contractors to secure performance of their projects, without regard to rights of owners, lessors or other lien holders. In other words, no other creditor had a prior right to the assets of the contractor

regardless of any legal agreements or registered mortgages. This was one of the main reasons why leasing has been difficult in the previous boom in Saudi construction market. This reason tended contractors to purchase their own needed equipment.

2. Saudi contractors in the boom period were making a lot of money therefore they did not realize that they needed leasing to procure their needed equipment more profitable. Their huge profits were sufficient to keep them liquid and they managed to buy their equipment outright.

3. Leasing facility requires a very sophisticated market to flourish. Saudi Arabia lacked a very competitive market as far as the Saudi contractors were concerned in the immediate past, therefore, leasing did not hold ground in this country.

4. In addition to the above, there were not enough leasing agencies available in the market.

The equipment purchased by the contractors in the boom time has not depreciated enough to warrant new equipment procurement by them for the new contracting projects in the market. As the Saudi market has become very competitive, as far as construction is concerned, the contractors profit margins has shrinked considerable. Therefore, the contractors are expected to use the leasing facilities available in the market for procurement of the needed equipment. The leasing facilities are now supported by the commercial banks as many new

leasing agencies have been established in the market, all to contribute to a good leasing business in the years to come.

E. COMMUNICATIONS BETWEEN CONTRACTORS AND COMMERCIAL BANKS

This division includes both the securities and information required by commercial banks form contractors.

E.1 : The respondents circled the following types of securities among the listed securities in the questionnaire:

- Bank counter-guarantees for foreign contractors from their home banks.
- Corporate letter of guarantees also required from big foreign companies like Redic Dealam and Bechtel groups.
- Assignments of contract proceeds from most Saudi contractors for all types of loans.
- Personal guarantees: These are not always approved from commercial banks, but it is provided form the Saudi partners in a joint venture arrangement.
- Cash margins for most contractors and especially needed for all types of bonds and letter of credit financing.
- Asset for collateral: not approved anymore by the commercial banks.

E.2 : The respondents circled the following types of needed information among the listed ones in the questionnaire.

- Description of proposed work

- Prequalification document
- Value of work already in progress
- Balance sheet and Income Statements for previous 3 years.
- CAsh flows withdrawal and payment schedule.
- Contract agreement
- Summary of proposed financial needs with attached securities.
- Contractor's schedule and program (not always)
- Progress reports (bi-yearly)
- Annual financial statement.

F. OWNERS REQUIREMENTS FROM CONTRACTORS TO RELEASE FINAL PAYMENT/RETENTION

This division includes what is actually required from contractors to owners for receiving the final payment/retention money. These requirements, as per the respondents, are the following:

F.1 Zakat/Income TAx Certificate

There are two kinds of Zakat/Income Tax certificates; the initial certificate and the final certificate (appendix shows a copy of the final certificate. The initial certificate is issued for each project alone or for all projects done, but the final certificate is issued on an annual basis. The initial certificate enables contractors to bid new jobs while the final certificate is in process, but with this initial certificate, final payments/retention money cannot be collected. In contrast, final certificate enables contractors to bid in new jobs and to collect their final payments/retention money from owners

(government agencies).

F.1.1 Rates of the Income Tax/Zakat for Final Certificate

Rates for the Saudi contractor or Saudi partner in the joint venture organization are called Zakat. The value of this Zakat is 2.5% (net worth), which includes the profit of last year, while the rates for the foreign (non-Saudi contractors) are called Income TAxes. The value of these income taxes are charged on the profits as shown in the following scheme.

First SR100,000 of annual profit	= 25%
Next SR400,000 of annual profit	= 35%
Next SR500,000 of annual profit	= 40%
Thereafter (> SR1000,000)	= 45%

F.1.2 The Calculations for Initial Zakat/Income Tax Certificates

1. Calculate the estimated profit for each contract, which is always considered 15% of contract value.
   Contract value x 15% = Y.

2. Reduce the taxable amount (y) by 30% which is considered as general expenditures.
   Therefore, Y x 30% = E, and Y - E = F.

3. Then this (F) value is the taxable amount. For Saudi

contractors the initial Zakat will be F * 2.5%. And for foreign contractors the initial tax will be F * (25%, 35%, 40%, or 45% as the case may be).

4. Then an account of file for each contractor is opened in the Zakat/Income Tax agency. In this account the amount paid for the issuance of the initial certificate is registered. If this registered amount comes to be less than the actual Zakat amount (which is used for the issuance of final certificate based on the actual profits) then, the contractor must provide this difference. On the other hand, if this registered amount came to be greater than the actual Zakat amount, then this residual amount is kept in the contractor file as credit for him (not paid back to him) and will be applied towards future Zakat amounts.

F.1.3 : The Requirements from Contractors to Zakat/Income Tax Agency For the Opening of New Account (File)

Contractors are required to provide the following to the Zakat/Income Tax Agency for the opening of new files.

- A copy of the chamber of commerce and industry membership certificate
- A copy of the deed of the headquarters building including any branches building, or their rental contractors
- A copy of the partnership contract or the corporation contract which should be notorized by the Government appointed Notary

- A copy from purchase contracts for any equipment
- A copy from all issued permissions which depends on field of specialty (it may be industrial, agricultural, health or commercial permissions)
- A mail box number
- A copy of telephone bills (home and office)
- A letter from the applying contractor to the manager of the Zakat/Income Tax Agency discussing what is actually needed from the Zakat/Income Tax authority
- A contractor must get an application from the Zakat/Income Tax authority and must fill it and sign it
- Each opened file has a number by which the contractor can make further contacts with the authority.

F.1.4 : Tax Holiday

Some of the foreign contractors, especially the new ones who have just started to work in the Kingdom, may enjoy a tax holiday. Tax holiday is an expression given to those who are not required to pay Income Taxes for some period. Usually this is done as an incentive for foreign specialized contractors to do work in the Kingdom. This tax holiday period may last for 3 to 5 years.

F.2 The Required Release Certificates for Indemnity and Claims

The Government Agencies require from contractors a list of released certificates for indemnity and claims from the following organizations.

- Zakat/Income TAx agency (Final Certificate)
- Saudi Telephone Agency
- Sewage and Water Directorate
- The Saudi Consolidated Electric Company (SCECO)
- General Organization for Social Insurance (GOSI)
- Visa Clearance Certificate

In addition to all above requirements, the performance bond must be renewed so that it will not expire until it covers the whole maintenance period.

G. CONTRACTORS FINANCIAL PROBLEMS

In this division, major financial problems faced by the contractors will be highlighted as indicated from the respondents experiences. The following is the description of these problems which are listed in Table 3.9 with their scores (using the rating system) provided in the questionnaire.

G.1 Competitors Are Bidding Below Cost

This problem is very dangerous and it is seriously affecting contractors from a financial point of view. Because if a contractor bids below cost, the chance for getting the same bid by other constructions is very thin, resulting in reduction in total volume of work for other contractors with the same overheads which will lead to sever financial problems.

G.2 Dealing with Commercial BANKS

TABLE (3.9)

Ranking of the financial problems as indicated by the used rating system.

Problem	Ranking *	Score
- Too much competition	13A, 4B, 3C	83
- Bidding below costs	11A, 6B, 3C	80
- Delay in progress payments	12A, 2B, 6C	76
- Dealing with banks	7A, 8B, 5C	70
- Fewer projects being offered	6A, 8B, 6C	67
- Issuance of Zacat/income tax final certificate (long time)	8A, 5B, 7C	68
- Cash margins blocked by banks	7A, 6B, 7C	67
- Front-end loading	This problem discovered by commercial banks	-
- Delays caused by consultants	10A, 5B, 5C	75

* A = 3 Very serious (significant delay and/or cost increase).

B = 2 Serious (small delay and/or cost increase).

C = 1 Irritating (small delay and/or little cost increase).

Example

$$\text{Score} = \frac{13x3+4x2+3x1}{20} = \frac{50}{20} = \frac{2.5}{3} = 0.83 \times 100 = 83$$

Lately, commercial banks are very cautious in their dealings with contractors, as many credit facilities were approved by the banks in the boom period without enough analysis and securities resulting in heavy bad debts to the banks. The contractors are complaining now about the tough securities required by banks, specially in bonds. Moreover, SAMA regulations require a withholding tax (about 15% of paid interest) to all outside credit facilities (loans from outside Kingdom banks). This regulation reduces the tendency for outside credit facilities applications by contractors. However, very recently, in April 1987, SAMA cancelled this regulation.

G.3 : Delays from the Appointed Consultants Who Are Doing Supervision Services For Owners

When owners award their contracts to the successful responsible bidder, they do also appoint certain consultants to supervise their projects. The actual role of those consultants are to review all plans and specifications, to remedy any mistakes done by the original consultants, supervise the construction work and to redesign any changes required by the owners. Sometimes, contractors finish their mobilizations and are ready to construct their projects early but they cannot do so as the appointed consultants stop them from this in order to correct original designs. During this time the contractor stands idle. This situation has been repeatedly mentioned by many respondents. The contractors lose too much in terms of over head and idle equipment costs during this idle time and they are compensated only on the basis of completed work of the project.

G.4 : Delay in Payments Form Owners

This problem is repeatedly mentioned, particularly by those contractors who are working for the Government agencies. The contractors have reported delays of as much as 180 days. The main reason for these delays is government delays in budget announcement as well as the total performance of these contractors. In addition, government agencies are now doing detailed review of each submitted invoice by contractors before payments are made. Lately, after the announcement of the Budget for 1987 fiscal year, most of the contractors whose performance has been good are being compensated. It was also evident from the responses that the contractors who are working for ARAMCO get paid within to 30 to 40 days from submission of invoice and this number is increased slightly in the case of contractors who are working for Royal Commission for Jubail and Yanbu who reported to be getting paid within 60 days after submitting their invoices.

G.5 : Too Much Competition

This problem is increasingly causing complications for contractors as they tend to slash their profit margins when there are a lot of competitors who are less responsible bidders. The number of competing firms for some large projects has reached to more than 20 recently.

G.6 : Only A Few Projects Offered

Most of the infrastructure projects in the Kingdom have been either completed or near completion. This has resulted in a lesser

number of projects offered to the contractors in comparison with the boom period. In addition, there is a stiff competition among the contractors for the few projects offered lately. Both of the above aspects are severly affecting financial positions of the contractors in the Kingdom.

G.7 : The Zakat/Income Tax Certificates Take A Long Time Before They Are Issued

Most of the respondents have complained about this. This results in delayed final payments/retention money which affects the contractors' financial commitments to other creditors.

G.8 : The recent tendency among banks to deal with only specialized contractors (hi-tech contractors) and those having certain level of outstanding value of works in their hands.

G.9 : Cash margins which are blocked by banks for security purposes are also affecting the contractors financially.

G.10 : Front Loading Problems

Lately, with the reduction of the contracts in which advance payments are provided by owners, most of the contractors are using the front-end lending policy to recognize more income in the early stages, to be used to cover their needed liquidity problems. But what actually is happening is that the contractors take this recognized income and invest it in short investment instruments like gold, silver, etc. As the markets for the precious metals is very volatile, contractors loose considerable sums when they can not get their investments back when the price of these metals goes

down.

H. PENALTIES

This division describes the penalty amounts and procedures as applied agains contractors for delay in government agency contracts.

H.1 The Amount Of Delay Penalties

The maximum amount of the delay penalties are either 10% of the contract price (this is applied if the residual work affects the complete usage of the project by owners) or 10% of the price of the residual work (this is applied if the residual work does not affect the usage of the project by owners). This includes the extra supervision consultant fee which is calculated as follows:

- If the consultant is paid by certain periodic payments or by certain percentages on contract price, this extra fee must be calculated on the same basis.
- But if the consultant is paid in a lumpsum basis the following equation is used to calculate the extra fee for consultant for the extra time which was originated by contractor delays:

  1/100 x contract price x (delays measured in days)/(contract period in days).

H.2 Procedure For Applying The Penalty Policies

Delay penalties are divided into three parts:

First part : The penalty on this part is equal to one-fourth of the

average daily cost for each delayed day until it reaches the first 15 days or 5% of the contract price or residual work price.

Second part: The penalty on this part is equal to average daily cost. But the total penalty amount for the three above parts must not exceed the maximum penalty which is discussed above in F.1.

Third part: The penalty on this part is equal to average daily cost. But the total penalty amount for the three above parts must not exceed the maximum penalty which is discussed above in F.1.

CHAPTER 4

EVALUATION OF CONTRACTORS BY COMMERCIAL BANKS IN SAUDI ARABIA

This Chapter describes the way in which banks evaluate contractors for the purpose of credit approvals. This will be done by presenting two actual case studies. These case studies consist of financial memoranda which were prepared by bankers annually.

4.1 Case Study No. 1

4.1.1 Purpose

The purpose of this financial memorandum is to recommend overleaf financial facilities for approval, analyze 1982 financials and examine the applied contractor's future prospects.

4.1.2 Project Distribution

The following is the description of the project which the applied contractor will use for the required proposed financial facility.

This project is a two-year project, valued at SR:46.5 million. The project consists of the construction of a branch bank and shopping mall for National Real Estate Company in Dammam, a wholly-owned subsidiary of National Commercial Bank. This project

will be built in two phases. In Phase I, a 5 story bank with a full basement will be constructed. This is a 6,000 square meter building which will be fully furnished. Construction will be completed within one year with the basement and first floor complete for occupancy within 10 months. In the second phase, an existing National Commercial Bank (NCB) branch at the site will be demolished to provide space for the construction of a two-story shopping mall (22,000 square meters) with partial basement (7,750 square meters). This will be partly finished with final finishing and decoration left to tenants. The contractor has broken down the costs of construction as follows (in SR:million):

Table 4.1

	Bank	Mall	Temporary works	Total
Material	9.2	15.8	0.05	25.00
Labor	3.8	6.5	0.10	10.40
Equipment	0.6	3.1	0.05	3.75
Overhead	1.1	2.4	-	3.50
Profit	1.3	2.5	-	3.80
	16.0	30.3	0.20	46.50

4.1.3 The Proposed Needed Financial Facilities

The contractor needs three new financial facilities that will be used to finance work on construction of a branch bank and shopping mall for NRE. These facilities are as follows :

A. Issuance of a 5% performance bond (tenure 3 years) and a 20% advance payment bond (tenure 2 years). Total value of coverage of these two bonds is SR:11,750,000.

B. SR:13,000,000 for opening of sight/acceptance documentary letter of credit. This line represents the full value of imported materials. All LC's will be opened within the first six months with deliveries coming in the 6th to 12 months. A large portion of imported material will be used in the bank building which will be completed within 12 months (basement and first floor complete for occupancy in 10 months).

C. SR:3,000,000 for the discounting of progress payment invoices (PPF loan).

4.1.4 Bank Report

This report consists of three parts, history (background) about the applied construction company, their annual financial performance, and finally the bank recommendation.

4.1.4.1 History of the Applied Contractor

A. Current Project Status (1982):

The applied construction company (for anonymity, we will refer to this Company as 'XYZ') was formed in 1978 with a paid up capital of SR:3 million which was increased to SR:8 million in 1981. In January 1983, the company received ministerial approval to increase their paid-up capital to SR:20 million, while an application to increase capital to SR:30 million was being made. XYZ is a joint venture between a Saudi Contractor and a Pakistani Government owned company engaged in civil construction. XYZ specialized in civil construction (landscaping, housing, schools, commercial centers, etc.). Clients are usually government agencies like the Ministry of Defense, Royal Commission, Saline Water Conversion Corporation (SWCC), US Army Corps of Engineers and private owners. The Company has concentrated on large contracts varying in size from SR:18 million to SR:700 million. As of December 31, 1982, XYZ had 6 projects on hand with a total value of SR:1792.9 million. Of this total, King Khaled Military City projects accounted for SR:1483.4 million. Overall works completed represents 52% with the exception of King Khaled Military City projects (in area 2 and 5) which will be completed or substantially completed by the end of 1983. XYZ has good rating from consultants on various site visits and has been able to realize budgeted profits on projects. The only problems were in SWCC headquarters (delay in appointment of consultant, project redesign and change orders) which were beyond the company's control and have resulted in a claim of SR:50 million by XYZ. The project has been almost completed with very good ratings from the consultant. The total loss on the

project would be approximately SR:35 million which has been accounted for. XYZ expects to receive between SR:25 and SR:35 million from its claim. XYZ has grown steadily over the years concentrating on projects in their area of expertise and strengthening their balance sheet through retention of profits (retained earnings not distributed as dividends). The owners of XYZ did not give guarantees (personal guarantees, corporate guarantees) and preferred to pay cash margins instead to banks as securities. XYZ has now established itself as a major civil contractor with banks competing for business.

B. Industry Relationship

The decline in oil revenues has resulted in the cancellation and deferral of projects. Also, owners (government agencies) are now splitting large projects and awarding the same to different contractors. The number of bidders on projects has increased resulting in very competitive tenders. The government is showing a definite preference for 100% Saudi companies and it is expected that XYZ will see 100% subcontracting from the Saudi companies that are awarded contracts. While the company recognized the downturn in the construction market, it expects to get additional business. The main areas identified are :

- Ministry of Defense and Aviation (MODA) - defense projects covering computer control rooms, airports, ports, military bases, housing and recreational centers.

- Ministry of Education - Schools and Housing

- Ministry of Health - Hospitals

- SWCC - Site preparation, housing, sewage and water supply.

- Aramco/Royal Commission for Jubail and Yanbu - work from these owners is expected to reduce substantially.

With the company's major projects nearing completion and a downturn in the market, the company expects to demobilize on some projects and forecasts a full year 1983 turnover of SR:515 million (excludes new projects) with a profit before tax of 6.5%. The turnover of the first three months of the year is SR:125 million.

C. Management

The management of the company is made of professionals with a number of years experience in civil construction and are all Pakistanis. XYZ is run by its Managing Director, with the assistance of general managers finance, projects and administration, and under the supervision and control of a Board of Directors consisting of two nominees of each partner. XYZ has a professional style of management and is very open with bankers in terms of information. There has been no major change in senior management which has now developed a good track record and experience in Saudi Arabia The approach of the management has been conservative with growth well managed along its established areas of expertise. XYZ has a good accounting and reporting system in place as is evident from information being available when requested. The

company prepares bids individually by project based on drawings, estimates from material suppliers and subcontractors (these estimates contain a clause for discounts if contract is awarded which is not factored in the bid). Overheads are built in on a past percentage based on experience. Profit is based on competition but the company does not quote at margin below 6%. Contingencies ranging from 1% to 5% are built in based on whether the company has experience with similar jobs or not. Progress reports (physical) by project are received at the company headquarters and reviewed by a committee consisting of the Managing Director and Finance Managers. Reports on financial matters are also received monthly and reviewed by this committee. XYZ has cash flows by project. The company's labor is from Pakistan and the management is used to dealing with them.

4.1.4.2 1982 Financial Performance

This division includes a review of the following aspects, turnover and earnings, their balance sheet, and cash flows.

A. Turnover and Earnings

The year 1982 was another good year for XYZ as turnover increased by 58% from SR:305.4 million in 1981 to SR:483.8 million in 1982 due to rapid progress on KKMC projects. However, the increase in turnover showed a declining trend indicating tapering off in the quantity of new business. Earnings did not increase proportionately to turnover and profit margins have decreased from 16% (SR:46.5

million) in 1981 to 8% (SR:39.6 million) in 1982. The main reason for the drop was due to :

1. The increase in direct costs which was caused by higher material consumption (SR:260 million in 1982 versus SR:94 million in 1981) which alone accounted for 92% of the increase. This is to be expected as XYZ progressed to the stages of its projects where material consumption peaks.

2. Higher social and general administration expenses: This is due to an increase in salaries, wages and social insurance.

3. Loss recognized on SWCC project.

4. Front loading on the KKMC projects.

B. Balance Sheet and Cash Flows

In this division, the following financial ratios will be analyzed :

- Receivables (turnover of average collection period)
- Inventory turnover in days
- Financial Leverage

B.1 Definitions of financial ratios that will be analyzed in this financial performance

B.1.1 Inventory Turnover

The effectiveness with which a firm uses its inventory to support sales can be measured by inventory turnover.

Inventory turnover is the number of times the annual cost of sales exceeds average inventory. It is computed by dividing the cost of goods sold by inventory. The greater the number of times per year that inventory turns over, the more efficiently the inventory is being used. Inventory turnover also can be measured in days as expressed in the following equation. Inventory/cost of goods sold x 365. The smaller the number of days inventory per year, that inventory turns over, the more efficiently the inventory is being used. (14,19,22,31).

B.1.2 Receivables Turnover

Receivable turnover is an activity ratio. Activity ratios measure the effectiveness of management in utilizing specific resources under its command. Activity ratios are often referred to as turnover ratios. They indicate the effectiveness with which different assets are being utilized in the business. Receivable turnover is simply the sales divided by accounts receivable. The greater the number of times that accounts receivable turnover, the smaller the amount of funds that the company has 'tied up' in account receivables and the greater the amount of funds that it can invest in other assets. The same ratio can be expressed in an alternative form average collection period or number of days sales in accounts receivables. This can be determined by the following equation: account receivable/sales x 365 days. It will indicate the number of days required for the company to col-

lect its accounts receivable. It is better to keep this number of days as low as possible. (14,19,22,31)

B.1.3 Financial Leverage Ratio

The Financial Leverage Ratio, also referred to as debt or solvency ratio, is designed to assist the decision maker in judging whether a firm has too little or too much debt. This ratio can be determined by the following equation: Leverage = Total Liability/Tangible Net Worth (equity). This ratio is important to management, creditors, and shareholders because it indicates the firm's financial risk. As this ratio rises, financial risk increases. (14,19,22,31).

B.2 XYZ's Financial Performance

B.2.1 Leverage = Total Liability/Tangible Net Worth

Table 4.2

XYZ's Leverage in Preceding 3 years

1980	1981	1982
4.7	5.0	4.3

Leverage continued to improve as the policy of retaining earnings has increased tangible net worth (owners of the company equity contributions, which includes preferred

stocks, common stocks, retained earnings and paid up capital) to SR:79.9 million. In January 1983, XYZ received ministerial approval to increase paid-up capital to SR:20 million while an application for a further increase to SR:30 million is being made. This will be done by way of capitalization of retained earnings. Earnings retention and the increase in net worth have brought leverage down to 4.3. But this leverage is still high, a point to note is that customer advances account for approximately 57% of total liability (these will be reduced with ongoing construction and will impact cash inflows not outflows as they will be amortized against billings). Loans consist of SR:23 million owing to the National Bank of Pakistan and SR:19.9 million to National Commercial Bank, Dammam. A point to note is that debt could be substantially reduced if cash margins of SR:37.2 million were released. These have traditionally been high due to the absence of shareholder guarantees. These cash margins were 25% in the past versus 10 to 15 percent today.

B.2.2 Turnover Ratios (Receivable Turnover and Inventory Turnover)

Many contractors saw a slowdown in receivable collection in 1982, but XYZ enjoyed an improvement in receivable turnover to 69 days versus 88 days in 1981 reflecting the excellent payment practices of MODA (Ministry of Defense) the XYZ's principal client. Inventory turnover similarly improved as inventory levels were well controlled after the

large 1981 increase in anticipation of higher materials requirements in 1982.

B.2.3 Cash Flow

Cash flow of the project which is presented in Table 4.3, is divided into two divisions, Inflow and Outflow.

Inflow consists of gross billings, mobilization advances (advance payments), and refund of bank cash margins, less mobilization advance deductions and retention money deductions.

Outflow consists of bank margins (on both bonds and L/C, capital expenditure, material, labor wages and benefits, staff salaries and benefits, subcontracts, financial charges and overhead. This cash flow is done on a quarterly basis. Then, a quarterly excess/deficit is determined (total inflow - total outflow) and cumulative excess/deficit is also determined. From this cash flow, this company needs credit facilities from the second to fifth quarter only, with a maximum deficit of SR:3.505 millions. Because of this, XYZ requested a PPF loan from the bank to cover this deficit.

4.1.4.3 Risks

This includes customer, technical, financial, and market risks.

A. Customer

TABLE (4.3)

BANK BUILDING AND SHOPPING MALL PROJECT

(FIGURE IN MILLION SRs)

PROJECTED CASH FLOW

	P 1ST QTR	E 2ND QTR	R 3RD QTR	I 4TH QTR	O 5TH QTR	D 6TH QTR	7TH QTR	8TH QTR	9TH	TOTAL
IN-FLOW										
GROSS BILLING	1.150	3.950	7.685	8.350	7.190	5.790	5.790	3.400	0.347	46.547
ADD:										
- Mobilization Advance	9.310	-	-	-	-	-	-	-	-	9.310
- Refund of Bank Margins	0.023	0.079	0.153	0.674	0.917	0.394	0.116	0.068	0.007	2.431
LESS:										
- Mobilization Advance Deduction	(0.230)	(0.790)	(1.537)	(1.737)	(1.670)	(1.438)	(1.158)	(0.680)	(0.070)	(9.310)
- Retention Money Deduction	(0.057)	(0.198)	(0.384)	(0.434)	(0.417)	(0.360)	(0.290)	(0.170)	(0.017)	(2.327)
NET CASH IN-FLOW	10.196	3.041	5.917	7.188	7.180	5.786	4.458	2.618	0.267	46.651
OUT-FLOW										
Bank Margin(Guarantees & L/C)	1.163	0.700	0.800	-	-	-	-	-	-	2.663
Capital Expenditure	0.650	1.570	0.550	0.385	0.150	0.250	0.050	0.025	-	3.630
Materials	0.750	3.375	4.875	6.265	6.680	2.230	0.230	0.250	-	25.000
Labour Wages & Benefits	0.650	0.950	1.225	1.285	1.320	1.250	1.030	0.860	-	8.570
Staff Salaries & Benefits	0.125	0.175	0.235	0.250	0.275	0.265	0.250	0.225	-	1.800
Sub-Contractors	0.200	0.150	0.200	0.100	0.150	0.100	0.050	0.050	-	1.000
Financial Charges	0.174	0.040	0.045	0.020	0.020	0.037	0.027	0.010	-	0.373
Overheads	0.265	0.285	0.325	0.330	0.320	0.315	0.295	0.250	-	2.385
TOTAL OUT-FLOW	3.977	7.245	8.255	8.635	8.915	4.447	2.277	1.670	-	45.421
QUARTERLY EXCESS/(DEFICIT)	6.219	(4.204)	(2.338)	(1.447)	(1.735)	1.339	2.181	0.948	0.267	1.230
CUMULATIVE EXCESS/(DEFICIT)	6.219	(2.015)	(0.323)	(1.770)	(3.505)	(2.166)	0.015	0.963	1.230	

NET CASH SURPLUS

Operating Surplus	SR.1.230 Million
ADD: Retention money	SR.2.327 "
Bank Margin	SR.0.233 "
	SR.3.790 Million

While National Real Estate is a private entity, its associate company National Commercial Bank has undoubted capacity to make payments.

B. Technical

This project is well within XYZ's capabilities based on financial and technical parameters. Construction techniques are straight forward and uncomplicated. Equipment and labor will be available from other projects or can be readily recruited from Pakistan.

C. Financial

The Company has built a solid financial base over the past four years with growth achieved through international management of cash and minimal bank borrowings in relation to the contract portfolio. Net Worth is well adequate to absorb any reasonable loss on the project.

D. Market Risks

This is XYZ's greatest challenge in 1983 as 1982 saw no new work awarded. Negotiations are under way on a SR:100 million contract at KKMC, but will not materialize until the third or fourth quarter of 1983. The company has also outstanding bids of SR:480 million for work on which it is the low bidder. However, award of these projects has been postponed repetitively by the ministries concerned and there is no indication of an early resolution. In the absence

of additional work, XYZ will be forced to demobilize part of its work force which will impair its ability to compete more than performance on existing contracts.

4.1.4.4 Recommendation

XYZ company continues to be a strong civil contractor with solid financial and technical achievements. Also, the company is growing in its line of expertise with retention of profit and prudent financing policies. The project is well within their capacity and is from a good owner. It was felt that this was a bankable exposure and recommended overleaf lines for approval.

4.2 Case Study No. 2

Case No. 2 is also a financial memorandum for the same contractor which was discussed in Case 1.

4.2.1 Purpose

The purpose of this financial memorandum is to review the 1985 performance of the XYZ Corporation. With recommendations to renew facilities at level of outstanding debt and to recommend approval to roll over the program payment financing (PPF), loan of SR:2.4 million on the CPP, Children Playlots and Playgrounds project, which is being built by XYZ for Riyadh Municipality, for a further period of 90 days.

4.2.2 Project Portfolio/Status

As of December 31, 1985, XYZ corporation had six active contracts in hand with a total revenue of SR:1,140 million See Table 4.4. Overall work completed represents 87 percent of the project portfolio with SR:144 million remaining, all of which will be completed in 1986.

With respect to contracts bonded/financed by the bank, XYZ Corporation received 85 days extension, from December 1985 to March 1986, on the NCB project. This extension was mainly required in order to carry out necessary repairs because of a fire in May 1985 which had damaged materials and civil works worth approximately SR:1 million. XYZ has already recovered this amount under the contractor's all risk insurance policy. The bank construction consultant who visited the site on January 25, 1986, has confirmed that the damage caused by the fire was approximately SR:1 million and that necessary repairs have already been carried out and the quality of work remains acceptable. As of this writing, progress on the NCB projects stands at 95% with initial funding over scheduled for end of April 1986. However, XYZ is having problems in completing the last 5% due to severe liquidity squeeze because they are unable to get the required materials to complete the project. The remaining balance to be billed/received under the contract is SR:8.2 million including retentions of SR:4 million. Management of XYZ has requested NRE (project owner) to release 50% of the retention which will enable XYZ to complete the project at the end of April 1986. Meanwhile, XYZ has received a payment from Ministry of Interior of SR:7 million which has gone to the American Express (AMEX), another financial entity with which

Table (4.4)

PROJECT PROGRESS
AS ON DEC. 31. 1984

NAME OF PROJECT AND LOCATION	OWNER	PERFORMANCE PERIOD	CONTRACT VALUE (SR)	% COMPLETED
Family Housing (Area 2&5 King Khalid military City Hafar Al-Batin	Ministry of Defense and Aviation	08/81 - 12/85	822.0	97%
National Commercial Bank Building & Shopping Mall Dammam	National Real Estate Company, Dammam	05/83 - 03/86	53.3	82%
Children Playlots and Playgrounds Riyadh	Riyadh Municipality	10/83 - 3/86 *	35.2	99%
Internal Security Forces Housing Project Hafar Al-Batin	Ministry of Interior	12/83 - 5/86	179.0 **	57%
35 Houses Project Petromin Shell Refinery Jubail	Petromin Shell Refinery Company	10/84 - 06/86	23.2	48%
Petromin Shell Refinery Housing Project II, Jubail	- " -	02/85 - 06/86	27.8	30%
			SR 1,140.0	

* Including Maintenance

** Total contract value is SR 344 of which CCCC's (XYZ's JV Partner) share is SR 165 MM all of this represents cost of material being supplied for the MOI project.

XYZ Corporation is dealing. Of this amount, SR:5 million will be ploughed back to XYZ Corporation. According to XYZ's management, they will use part of this amount, about SR:2.2 million, to complete the NRE (NCB) project in case NRE turns down their request for early release of retention money.

XYZ's children playlots project in Riyadh was handed over to the Municipality last year for which XYZ had received initial acceptance in April 1985. As per the terms and conditions of the contract, there was a 12 months maintenance period which ended in March 1986. Riyadh Municipality has requested XYZ to continue with the maintenance of the playlots up to May 31, 1986. Riyadh Municipality still owes SR:4.2 million to XYZ on this project, SR:3.4 million as final bill and SR:0.8 million as maintenance fee). The bank has a SR:2.4 million as PPF loan to XYZ which represents 70% of the SR:3.4 million final bill under this project. The bank representative has spoken with the supervising consultants for the job and also with deputy chief engineer of the landscaping department of the Riyadh Municipality, who has been responsible for the contract on behalf of the Riyadh Municipality. Both sources informed the bank that the quality of the work has been fully verified and that payment will be made after the new government budget is in place. As a result of the delay in the announcement of budget, the bank feels that it will be a long time before XYZ gets paid from the Municipality. The bank's direct exposure to XYZ amounts to SR:3.1 million, a PPF loan of SR:2.4 million on the CPP project and SR:637,000 overdue letter of credit refinance on the NRE project. As mentioned above, XYZ is

TABLE (4.5)

XYZ CORPORATION INCOME FROM OTHER SERVICES

Income

- Laboratory Testing Fee	1,888,283
- Plant Rental Charges	-
- Insurance Claims	1,416,123
- Disposal of scrape, salvoged material etc.	377,606
- Profit on disposals of Fixed Assets	58,365
- Commission Earned	1,115,963
- Exchange Earnings	4,360,234
- Income from Miscellaneous contracts	3,064,205
- Miscellaneous income	1,176,342
	13,457,121

SR:80 million Yiu Wing account. Yiu Wing is XYZ's joint venture partner on the MOI project and is responsible for supplying material to XYZ against sight letter of credits. The SR:80 million represents the cost of material delivered and stored on site by Yiu Wing. Reduction in this account takes place when XYZ uses the material and subsequently bills MOI. The level of days inventory is down to 247 days as compared to 303 in 1984 mainly on account of the KKM project nearing completion. Receivables of SR:53 million, including SR:36 million against contract and SR:17.9 million due from sundry debtors (advance payments to suppliers, advance payments to staff, advance to electric and water organization as security deposit, cash margins in banks, etc.). The balance receivables are due from good clients as such ultimate collection is not in doubt.

On the liability side, most notable is the increase in bank debt which shot up to SR:184 million in 1984. The banks debts increased by approximately SR:64 million in the last quarter of 1985 and was mainly to finance inventory. Advance payments have decreased to SR:36 million from SR:173 million in 1984. Up to the first quarter in 1985, XYZ was receiving advances from MODA for inventory purchases for the KKMC project. During 1985, however, the advances were no longer paid by MODA. In fact, due to slow amortization of the advance payment on the contract during 1983-84, deductions from progress billings to amortize the advance payment of 10% increased to a rate of 70% during 1985. This coupled with MOI's refusal to give advances against material delivered on site severely impaired XYZ's cash flow and is evidenced by

the lower advance payment item and higher bank's debts as of December 1985.

Leverage, in spite of the SR:13 million loss suffered in 1985, has slightly improved as compared to 1984 mainly because of reduction total liabilities. There was also a small withdrawal of SR:1.6 million from the company retention which was used to settle the tax liability of the non-Saudi shareholder and Zakat for the Saudi shareholder.

4.2.4 Prospects for 1986

For 1986, the company is projecting to a turnover of SR:144 million based on their existing projects. From a liquidity point of view, 1986 will be a very difficult year as the company is suffering from a serious lack of liquidity which is affecting all of their projects. In order for XYZ to remain in business, the owners have to inject sufficient capital in the next few months as XYZ is expected to face further delays in payments due to the current budget situation. The senior management of XYZ is presently requesting the government of Pakistan for additional financing to enable XYZ to complete their two large projects for MOI and KKMC.

4.2.4.1 Expected Cash Flows

Inflows

Residual Value/billings	SR:144 million
Receivables and Retentions	SR: 88 million

Bonds & L/C refinancing cash margins	SR: 16 million
Total Inflow	**SR:248 million**

Outflows

Cost to completion	SR:108 million
Liabilities (outstandings for 1985)	SR:150 million
Total Outflow	**SR:258 million**

This scenario reveals that, on an operating cash flow basis, XYZ is in fact insolvent. To cover the net cash outflow of SR:10 million, the company will have to sell part of their fixed assets, or the owner will have to inject additional capital. It should be noted that the net outflow will get bigger if, as is likely, the projects are delayed, which will further increase the cost for completion.

4.2.5 Risks

4.2.5.1 Liquidity

XYZ is facing a serious lack of liquidity which is affecting all their projects. Unless the owner injects sufficient capital, the company will not be able to remain in business. Although the risk is there, it is highly unlikely that the government of Pakistan will let the company go down, especially in a country like Saudi Arabia with whom they have very good relations.

4.2.5.2 Technical Performance

As apparent from the site visits, performance is not an issue

as long as XYZ has sufficient cash to fund the projects. The unavailability of new contracts is no risk to XYZ Corporation as the owners have decided to close the Company by the end of 1987.

4.2.5.3 Bankruptcy from General Lack of Liquidity

There is a risk that the Company's creditors may force XYZ into bankruptcy. Although the risk is there, it is mitigated by the fact that XYZ's projects are nearing completion. As such, it is in the best interest of the creditors to let the company remain in business. As detailed above, XYZ will at least cover 90-95% of their liabilities from cash flow if the projects are completed, coverage would be much lower in the event of bankruptcy.

4.2.5.4 GOSI

XYZ owes SR:8 million to GOSI as such, there is a risk that GOSI may block payments due from the various project owners which may force the company into liquidation. This risk is mitigated by the fact that GOSI has already agreed to reschedule the payment. Additionally, XYZ has recently suggested to GOSI that they will instruct KKMC and MOI to effect payments directly to GOSI out of the proceeds of progress billings, based on the rescheduling earlier agreed to by GOSI. This risk, however, remains very real and substantially beyond the bank's control, although the bank monitors it through close contact with the Company.

4.2.5.5 Risks Specific to the Bank Exposure

XYZ's performance period on NRE project expired on March

30, 1986. Technically, NRE (owner of the project) could call the performance bond at any time. The bank has spoken with the supervising consultants for the job, who informed the bank the project is almost complete and they are fully satisfied with the quality of the work. They said that NRE wants XYZ to complete the project as soon as possible for which NRE has agreed to release to XYZ part of the retention money (subject to approval from the bank, because the bank has assignment of contract proceeds as a security from the XYZ) to complete the remaining work.

NRE's agreement to release retention money is an indication that they want to avoid making a call under the bank performance bond due to NRE and NCB's close relationship with XYZ Corporation.

4.2.6 Recommendation

XYZ Corporation is a weed-out name. One of the projects bonded by the bank has been completed and the other is nearing completion. The strategy with this name is to liquidate the bank's direct outstandings from the proceeds of the NRE project and to try to cash collaterize our bonds although the probability of the bank bonds being called is very low as long as XYZ remains in business. The approval for this was recommended on an as-presented basis.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This Chapter consists of a summary of this thesis, followed by the conclusions drawn from this study. Some very useful recommendations have been made in the end on how to improve the construction industry in Saudi Arabia. Finally, the areas of further research have been identified.

5.1 Summary of the Thesis

Chapter 1 discussed the Saudi Financial System in general. Then, a brief outline of the Saudi Five Year Development Plans was given with detailed description of the Fourth Five Year Development Plan (1985-90) and its relations to construction industry. A brief construction market overview was also given, which described the effect of current economic situation on the construction industry.

The objective of the thesis, previous studies done, thesis scope and finally thesis methodology have been discussed briefly.

Chapter 2 discussed the contractor's financing, which includes a general consideration covering bidding practices, types

of contracts, and cash flow in construction industry in Saudi Arabia Then, it discussed the contractor's financing requirements, covering the working capital requirements in internal and external resources, plant and equipment financing requirements (covering purchasing, leasing and renting options), and the needed types of contract bonds in Saudi Arabia. Also, it discussed in detail the role of commercial banks in construction business financing in Saudi Arabia, covering all types of financial facilities which are provided by these banks and the relationship between these banks and contractors.

Chapter 3 discussed the applications of financial facilities by contractors in the Eastern Province of Saudi Arabia, covering the methodology of the survey used in recognizing these applications, the analysis of the survey and finally the discussions of the results of the survey.

Chapter 4 discussed in detail how commercial banks evaluate contractors in Saudi Arabia for financial facilities approval by presenting two actual case studies. These case studies consist of financial memoranda which were prepared by banks.

5.2 Conclusions

1. The Saudi Financial System consists of mainly five governmental lending institutions and commercial banks. Both of these sources are regulated by the Saudi Arabian Monetary Agency (SAMA) and the Ministry of Finance and National

Economy (MOFANE) which has the ultimate control of the financial sector. Comparatively, the number of commercial banks loans are much more than those of the government lending institutions. Moreover, loans issued by those governmental lending institutions are mainly given to private owners and some public agencies, not to contractors. Therefore, the commercial banks are considered the major sources of contractor financing externally.

2. Saudi Arabia's economy transition (changing from construction based growth to production based growth near completion of major infrastructural development and the decline in oil revenues), has transformed the contracting market in the Kingdom into a very high competition market. The market, once characterized by under-capacity, high profitability and generous payment terms, is now characterized by intense competition, low margins and liquidity problems. In addition, the market has become more sophisticated as the segments have diversified to high-tech to O&M, services, civil and road construction sectors.

3. There are two main sources of financing for contractors; internal financing sources and external financing sources. Internal financing sources are mainly represented by contractor's paid in capital and their retained earnings (mainly from retained contract proceeds). External financing sources are mainly represented by commercial banks financing facilities.

4. It was found that contractors with low annual average value of work of less than SR:50 million are meeting between 30 and 50% of their financial needs from their internal finances. On the other hand, contractors with high average annual value of work, over SR:100 million, are meeting between 10 and 20 percent of their financial needs from their internal financing sources, which means that they are dealing more with commercial banks.

5. Previously, during the boom period (1978-82), commercial banks were approving financial facilities without any known strategy, detailed analysis and intensive required securities, resulting in severe losses to banks from bad debts. Lately, the commercial banks are conducting certain planned strategies, detailed analysis and enforcing intensive securities requirements from their clients (contractors) before they issue any financial facility.

6. Some commercial banks are controlling their relations with construction companies by applying certain strategies such as requiring limitations from contractors to reduce the risks associated with the construction industry (e.g. limiting the minimum levels of sales or biddings, and net worth for both specialized and general contracting firms for different categories of companies).

7. The construction projects in the Kingdom have become more sophisticated lately and are now oriented towards hi-technol-

ogy followed by operations and maintenance, etc. Some commercial banks are also applying a priority system in their dealing with construction market segments. These preferred target construction projects are arranged in descending order of priorities as follows :

a. Hi-tech (refineries, pipelines, plants, defense, telecommunication, etc.).

b. O. & M. (technologically oriented plus training and manpower development).

c. Services (catering, less sophisticated O. & M., etc.)

d. Civil (buildings, general construction, etc.).

e. Roads (earth works, site development).

8. The following are the financial facilities which are provided by commercial banks and utilized by contractors in Saudi Arabia.

- Contract bonds
- Credit facilities
- Documentary letter of credits
- Leasing facilities
- Hedging services
- Syndicate services

9. There are four main types of contract bonds used by contractors in Saudi Arabia which are: bid bonds, performance bonds, advance payment bonds and retention bonds. These bonds are under security bonds in their type and issued in the form of bank letters of guarantees. Also, these bonds are unconditionally in their calling by beneficiaries.

10. There is an important conclusion made as to why the Saudi Arabian Government takes bank guarantees (bonds). It is not simply that the bonds are issued in lieu of cash deposits. These bonds are considered additional support of extra opinions on the judgement made by the ministries. In other words, the Saudi Government is looking for a third party opinion as to the credit worthiness and abilities of the companies which are carrying out their development plans. They put considerable value on the judgements and the commitments of the guaranteeing banks. They are certainly not in need of a cash deposits.

11. Credit facilities are mainly represented by the following types of loans.

- Short loans
- Line of credit (overdrafts)
- Progress payment financing (PPF)

12. Documentary letters of credit are mainly represented by the following types

- sight letter of credit
- acceptance letter of credit
- refinancing letter of credit

13. Leasing product is Islamically acceptable and appropriate, because it earns rental income and not an interest bearing facility. Commercial banks are providing financial leasing facilities represented by direct lease, sale-lease-back and vendor lease. Contractors in Saudi Arabia, in the past, were rarely utilizing leasing facilities in their procurements of the needed machinery. This was mainly due to :

a. Governmental agencies were asserting a first lien against machinery and other real assets which were employed by contractors to secure performance of their projects, without regard to rights of owners, lessors or other lienholders.

b. Leasing facilities require a sophisticated market to exist.

c. Saudi contractors in the boom period (1978-81) were making a lot of money and they tended to finance their needed machinery from their own working capital.

14. There are two types of hedging services which are utilized by contractors in Saudi Arabia; the forward transactions and foreign exchange options.

15. Syndicated financial facilities are frequently utilized by large

contractors to obtain the required financial facilities for large contracts because SAMA limits the credit which each bank can provide to its customers to no more than 25% of the banks' capital and reserves.

16. Commercial banks require the following types of informations from contractors before issuing their needed financial facilities :

- Description of proposed work
- Pre-qualification documents
- Value of work already on hand
- Balance sheet and income statement for at least 3 previous years
- Cash flows, showing inflows and outflows
- Contract agreement
- Summary of proposed financial needs with attached securities
- Contractor future business plans
- Progress reports

17. Commercial banks are utilizing the following types of securities to reduce their risks in dealing with contractors in Saudi Arabia.

- Assignment of contract proceeds
- Cash margins
- Banks counter guarantees (for foreign contractors)
- Corporate letter of guarantees (for foreign contractors)

- Personal guarantees

18. Cash margins which are blocked by commercial banks (for security purposes) from contractors when issuing them the needed contract bonds are 90% falling in the 0-15% range with the majority in the 11-15% range (as percentage of bond face value). The above percentages are confirmed based on the survey conducted.

19. Bond commissions (cost of bonds) which are charged by commercial banks for the issuance of all types of bonds are 85% falling in the 0.25-0.50 percent range (as percentages of bond face value). While SAMA regulations on these commissions fixed to 0.25% as maximum, in reality, commercial banks are charging more than this regulated fixed percentage to cover for their administrative costs and the associated risks.

20. Bond commissions (cost of bonds) are somehow related to blocked cash margins. Low commission (0.25%) were charged when high cash margins were provided and vice-versa.

21. Owners (government agencies) required the following from contractors before releasing the final payment/retention money.

- Final Zakat/income-tax certificates

- GOSI Certificate

- Release certificates for indemnity and claims from the following agencies :

- Saudi Telephone company
- Sewage and Water Directorate
- The Saudi Consolidated Electric Company (SCECO).

- Visa clearance certificate

22. Major financial problems which are faced by contractors are listed hereunder in descending order, according to the survey conducted. The percentages mentioned against each problem are represented by respondents' responses regarding their repetitions and degree of importance.

a. Too much competition (83%)

b. Bidding below costs (80%)

c. Delay in progress payment from owners (76%)

d. Delays caused by consultants (increase idle time) (75%)

e. Dealings with banks (70%)

f. Issuing final Zakat/income tax certificate (68%)

g. Cash margins blocked by banks from contracts (67%)

h. Fewer projects being offered (67%)

i. Front Loading Problems (This problem was mentioned by banks).

5.3 RECOMMENDATIONS

5.3.1 General Recommendations

1. As construction has declined, the need for operating and maintaining the Kingdom's infrastructure has increased, and it will continue to increase in the future. Diversification by Saudi contractors into these areas will lessen the impact of the decline in construction industry. Operations and Maintenance contracts can be sizeable - they are generally priced at about 10% of initial construction costs - and they have the advantage of being a steady source of work, rather than ending in the way that construction projects do. The extensive physical infrastructure constructed during previous planning periods must now be operated and maintained, and in this regard, it is likely that the annual net value (after costs of materials) of O. & M. contracts will exceed the net value of construction contracts during the Fourth Five Year Development Plan.

2. Pooling of small contractors with similar specialities can lead to better technical and financial performance. The teams of small contractors would stand good chances of receiving large financial facilities from banks, which in turn, will help them to work more efficiently on sophisticated projects. These pools can prove to be a good substitute for large foreign contractors as well as reduce the stiff competition in the

construction market.

3. Some of the Saudi contractors have different companies involved in different fields of the construction industry. This is causing a distribution of their financial resources and expertise which affects their performance. Pooling of these companies into one big company under one management, will enhance both the technical and financial ability of these contractors, which will also help him to bid for large projects with less overhead expenses.

4. Since leasing difficulties which had limited its usage by contractors in the past, no longer exist, it is time now for contractors to realize the value of leasing and try to use it as much as possible. Since leasing has the benefit of capital conservation and cash flow advantages, it will help contractors to alleviate liquidity problems faced by many now.

5. Preparing of target estimates by owners for their projects could lead to disqualify those contractors whose bid estimates are far below the anticipated costs. By doing so, the problem of bidding below cost can be reduced.

6. Increasing the percentage of the coverage of performance bonds, (from 5-10% to 20-30%) will screen those contractors away who tend to bid below cost. This may bring the required stability in the construction industry in Saudi Arabia.

7. The number of competitors can also be reduced if the owners

of the projects strictly apply the pre-qualifications technique (referred to in Chapters 2 and 3) covering both technical and financial performance of contractors.

8. High cash margin percentages which are blocked by commercial banks from contractors for security purposes to reduce their risks in issuing different types of bonds, can be reduced by increasing the commissions which are charged by banks on these bonds. By doing so, liquidity squeezing can be improved.

9. Issuing a Zakat/income tax bond from banks in lieu of depositing cash margins to the Zakat/income-tax agency when issuing initial Zakat/income tax certificates will reduce the liquidity problems which are faced by contractors.

5.3.2 Recommendations for Further Studies

1. Study the construction projects financing system (The Owner's Perspective), both for public and private entities in Saudi Arabia.

2. Study the relationship between contractors and consultant offices and identify the responsibilities for each party.

3. Study in detail the financial problems in construction industry in Saudi Arabia.

4. Study the construction companies bankruptcy and their financial commitments in Saudi Arabia.

APPENDICES

A. FORMS OF CONTRACT BONDS

البنك السعودي الامريكي
Saudi American Bank

Comm Reg:35319
Riyadh P O. Box 833. Phone 477-4770.
Telex 200195 SAMBA SJ
Jeddah P O. Box 490 Phone. 653 2255
Telex: 401108 SAMBA FX SJ
Al Khobar P O Box 842 Phone 864-5630
Telex: 670411 SAMBA

سجل تجاري : ٢٥٢١٩
الرياض ص . ب : ٨٣٣ . ت ٤٧٧٠-١٤٧٠
تلكس ٢٠٠١٩٥
جدة ص . ب ٤٩٠ . ت ٦٥٣ ٢٢٥٥
تلكس SAMBA FX SJ ٤٠١١٠٨
الخبر ص . ب ٨٤٢ ت ٨٦٤-٥٦٣٠
تلكس ٦٧٠٤١١

الأصل
ORIGINAL

210

Letter of guarantee for preliminary deposit

خطاب ضمان للتأمين المؤقت

Branch: _____

فـرع : _____

Number: _____

رقـم : _____

Beneficiary: _____

المستفيد : _____

Since Messrs, _____

حيث أن السادة _____

_____

Have tendered for _____

تقدموا بعطاء لـ _____

_____

We, Saudi American Bank, hereby unconditionally guarantee to pay to you upon receiving your first written notice requesting payment of an amount not exceeding
(Say

فاننا نحن البنك السعودي الأمريكي نضمن بموجب هذا ضمانا غير مشروط أن ندفع لكم بناء على استلامنا أول اخطار كتابي منكم مبلغا لا يتجاوز

Being 1 percent of the value of their offer as submitted in accordance with the conditions of the tender.

ويمثل هذا المبلغ ١٪ من قيمة العرض المقدم من عملائنا وفقا لشروط العطاء .

The validity of this guarantee extends up to

ويمتد مفعول هذا الضمان حتى

You should submit your request for payment of value of this guarantee within the period of the validity of this guarantee.

وعليكم أن تتقدموا بطلب دفع قيمة هذا الضمان خلال مدة سريانه .

Any dispute over the interpretation of the conditions of this letter of guarantee shall be subject to the regulations of the Kingdom of Saudi Arabia.

ويخضع أي نزاع حول تفسير شروط خطاب الضمان هذا لأنظمة المملكة العربية السعودية .

This guarantee shall become null and void after expiry date whether it is returned to us or otherwise.

ويعتبر هذا الضمان لاغيا ولا قيمة له بعد التاريخ المحدد لانتهاء سريان مفعوله سواء أعيد إلينا أم لا .

Saudi American Bank

البنك السعودي الأمريكي

_____
(Authorized Signer) المفوض بالتوقيع

البنك السعودي الامريكي
Saudi American Bank

211

Comm. Reg:35319
Riyadh P.O. Box 833. Phone 477-4770.
Telex 200195 SAMBA SJ
Jeddah P.O. Box 490 Phone 653 2255
Telex: 401108 SAMBA FX SJ
Al Khobar P.O Box 842. Phone 864-5630
Telex: 670411 SAMBA

سجل تجاري: ٢٥٢١٩
الرياض .ص. ب : ٨٣٣ . ت . ٤٧٧٠-٤٧٧٠
تلكس ٢٠٠١٩٥
جدة .ص. ب ١٩٠ . ت ٦٥٣ ٢٢٥٥
تلكس SAMBA FX SJ ٤٠١١٠٨
الخبر .ص. ب ٨٤٢ . ت : ٨٦٤-٥٦٣٠
تلكس ٦٧٠٤١١

Letter of guarantee for final deposit

خطاب ضمان للتأمين النهائي

Branch: _____

فـرع : _____

Number: _____

رقـم : _____

Beneficiary: _____

المستفيد : _____

Since you have awarded our clients Messrs. _____

حيث أنكم منحتم عملائنا السادة _____

a contract for, _____

عقدا يتعلق بـ _____

We, Saudi American Bank hereby unconditionally guarantee to pay an amount not exceeding (Say)

فإننا نحن البنك السعودي الأمريكي نضمن بموجب هذا ضمانا غير مشروط بأن ندفع مبلغ لا يتجاوز

Upon receiving your first written notice, according to your absolute judgement, of a failure in meeting the conditions of the above mentioned contract, thereby justifying such request as per this guarantee. The amount of this guarantee represents 5% of the value of the contract.

بناء على تسليم أول اخطار كتابي منكم وفقا لتقديركم المطلق أن العميل قد أخفق في تنفيذ شروط العقد المشار إليه آنفا مما يبرر طلبكم قيمة هذا الضمان وتبلغ قيمة هذا الضمان ٥٪ من قيمة العقد .

The validity of this guarantee extends up to the end of

ويمتد مفعول هذا الضمان حتى

You should submit your request for payment of value of this guarantee within the period of the validity of this guarantee.

وعليكم أن تتقدموا بطلب دفع قيمة هذا الضمان خلال مدة سريانه .

Any dispute over the interpretation of the conditions of this letter of guarantee shall be subject to the regulations of the Kingdom of Saudi Arabia.

ويخضع أي نزاع حول تفسير شروط خطاب الضمان هذا لأنظمة المملكة العربية السعودية .

This guarantee shall become null and void after expiry date whether it is returned to us or otherwise.

ويعتبر هذا الضمان لاغيا ولا قيمة له بعد التاريخ المحدد لانتهاء سريان مفعوله سواء أعيد إلينا أم لا .

Saudi American Bank

البنك السعودي الأمريكي

(Authorized Signer)

المفوض بالتوقيع

09/16109/6.80/1/4

البنك السعودي الامريكي
Saudi American Bank

Comm. Reg: 35319
Riyadh P.O. Box 833 Phone 477-4770.
Telex 200195 SAMBA SJ
Jeddah P.O. Box 490 Phone 653 2255.
Telex: 401108 SAMBA FX SJ
Al Khobar P O Box 842 Phone 864-5630
Telex: 670411 SAMBA

سجل تجاري : ٢٥٢١٩
الرياض ص . ب : ٨٣٣ . ت : ٤٧٧٠-٤٧٧٠
تلكس ٢٠٠١٩٥
جدة ص . ب : ٤٩٠ . ت ٦٥٣ ٢٢٥٥
تلكس : SAMBA FX SJ ٤٠١١٠٨
الخبر ص . ب ٨٤٢ . ت : ٨٦٤-٥٦٣٠
تلكس ٦٧٠٤١١

خطاب ضمان لدفعة مقدمة

Letter of guarantee for advance payment

فـرع : Branch: _____

رقـم : Number: _____

المستفيد : Beneficiary: _____

حيث أنكم منحتم عملائنا السادة Since you have awarded our clients Messrs. _____

_____

عقدا يتعلق بـ a contract for, _____

_____

فإننا نحن البنك السعودي الأمريكي نضمن بموجب هذا ضمانا غير مشروط بأن ندفع مبلغ لا يتجاوز

We, Saudi American Bank hereby unconditionally guarantee to pay an amount not exceeding (Say)

وذلك بناء على تسليم أول اخطار كتابي منكم على أساس تقديركم المطلق ان المقاول قد أخفق في تنفيذ شروط العقد المشار اليه انفا بما يبرر طلب قيمة هذا الضمان . ويمثل مقدار هذا الضمان ٢٠٪ من قيمة العقد .

Upon receiving your first written notice, according to your absolute judgement, of a failure in meeting the conditions of the above mentioned contract, thereby justifying such request as per this guarantee. The amount of this guarantee represents 20% of the value of the contract.

ويمتد مفعول هذا الضمان حتى

The validity of this guarantee extends up to the end of

وعليكم أن تتقدموا بطلب دفع قيمة هذا الضمان خلال مدة سريانه .

You should submit your request for payment of value of this guarantee within the period of the validity of this guarantee.

ويخضع أي نزاع حول تفسير شروط خطاب الضمان هذا لأنظمة المملكة العربية السعودية .

Any dispute over the interpretation of the conditions of this letter of guarantee shall be subject to the regulations of the Kingdom of Saudi Arabia.

ويعتبر هذا الضمان لاغيا ولا قيمة له بعد التاريخ المحدد لانتهاء سريان مفعوله سواء أعيد إلينا أم لا .

This guarantee shall become null and void after expiry date whether it is returned to us or otherwise.

البنك السعودي الأمريكي

Saudi American Bank

_____

المفوض بالتوقيع (Authorized Signer)

B. THE PRELIMINARY QUESTIONNAIRE

Questionnaire For Construction Financing In Saudi Arabia

1. Contractor's Name :

2. Category: - civil construction
   - building
   - services
   - suppliers/vendors

3. Approximate SR amount per year of business:

4. Source of contractor financing services:
   - Commercial Banks
   - If other, please specify:

5. Contractor's Financial Requirements:

   - Bonds:
     - bid bonds: (circle closest response)
       % of contracts required ?
       0-25, 25-50, 50-75, 75-100
       % of contract price ?
       1%, specify
       Range of cost of this bond ? (in % of bond price)
       .25-.50, .50-.75, .75-1.00, 1.00-1.25, 1.50-1.75, 1.75-2.00
       % of Cash Margin ?
       0-5, 5-10, 10-15, 15-20, 20-25, 25-30

     - performance bond :
       % of contracts required ?
       0-25, 25-50, 50-75, 75-100
       % of contract price ?
       5, 10, 15, 20, specify
       Range of cost of this bond ? (in % of bond price)
       .25-.50, .50-.75, .75-1.00, 1.00-1.25, 1.50-1.75, 1.75-2.00
       % of Cash Margin ?
       0-5, 5-10, 10-15, 15-20, 20-25, 25-30

     - advance payment bond:
       % of contracts required ?
       0-25, 25-50, 50-75, 75-100
       % of contract price ?
       5, 10, 15, 20, 25, 30, specify
       Range of cost of this bond ? (in % of bond price)
       .25-.50, .50-.75, .75-1.00, 1.00-1.25, 1.50-1.75, 1.75-2.00
       % of Cash Margin ?
       0-5, 5-10, 10-15, 15-20, 20-25, 25-30

     - retention bond :
       % of contracts required ?
       0-25, 25-50, 50-75, 75-100
       % of contract price ?
       10, specify
       Range of cost of this bond ? (in % of bond price)
       .25-.50, .50-.75, .75-1.00, 1.00-1.25, 1.50-1.75, 1.75-2.00
       % of Cash Margin ?
       0-5, 5-10, 10-15, 15-20, 20-25, 25-30

     - If other, please specify:

Discussion:

-Loans:
- short term loans
- term loans
- if other, please specify:

Discussion:_____

-Leasing:
- operating lease
- financial lease:
  - direct lease
  - sale-leaseback
  - vendor lease

Discussion:_____

6. Types of security/support usually provided to lender for credit facilities:
   - acceptable bank counterguarantees
   - corporate letter of guarantee
   - assignment of contract proceeds, acknowledgment of assignment
   - personal guarantees
   - assets for collateral
   - cash margin
   - if other, please specify:

Discussion:_____

7. List of requirements for obtainnig financial services from lenders:
   - description of proposed work
   - prequalification documents
   - list of work already on hand
   - balance sheet & income statement for at least three previous years
   - cash flow, indicating withdrawal and payment schedule
   - if other, please specify:

Discussion:_____

8. Please indicate major problems faced while working in Saudi Arabia (rank them by seriousness)*
   Examples:

   - too much competition
   - competitors bidding below cost
   - delay in payment from owner
   - dealing with lenders (banks)
   - few projects being offered

   * rating system definitions:
   A: very serious (significant delay and/or cost increase)
   B: serious (small delay and/or cost increase)
   C: irritating (no serious effect, requires minor rescheduling)

Discussion:

C. THE FINAL QUESTONNAIRE

Questionnaire For Construction Financing in Saudi Arabia

1. Contractor's Name :

2. Classification:
   - Building
   - Roads
   - Water & Sewage System
   - Electrical Works
   - Mechanical Works
   - Industrial Works
   - Marine Works
   - Well Drilling
   - Operation & Maintenance
   - Dams
   - General Contracting

3. Approximate SR amount per year of construction contracts:

4. Source of contractor financing :
   - Equity (contractor own resources), what % ?
   - Owner Progress Payment
   - Commercial Banks
   - Syndication (financing from more than one bank)
   - If other , please specify:

5. Types of contractor financial services provided by lenders:
   - Bonds: (circle closest response to following choices)
     - Bid Bonds:
       % of contracts numbers that required this bond ?
       0-25, 26-50, 51-75, 76-100
       % of contract price (face value of this bond) ?
       1%, specify
       Range of cost (commission) of this bond ? (as % of bond face value)
       .25-.50, .51-.75, .76-1.00, 1.01-1.25, 1.26-1.75, 1.76-2.00
       % of Cash Margin as % of bond face value ?
       0-5, 6-10, 11-15, 16-20, 21-25, 26-30 , 31-40,41-50,51-100
     - Discussion:

- Performance Bond:
  % of contracts number that required this bond ?
    0-25, 26-50, 51-75, 76-100
  % of contract price (face value of the bond) ?
    5, 10, 15, 20, specify
  Range of cost (commission) of this bond ? (in % of bond face value)
.25-.50, .51-.75, .76-1.00, 1.01-1.25, 1.26-1.75, 1.76-2.00
  % of Cash Margin (as % of bond face value) ?
0-5, 6-10, 11-15, 16-20, 21-25, 26-30,31-40,41-50,51-100
- Discussion:

- Advance Payment Bond:
  % of contracts number that required this bond ?
    0-25, 26-50, 51-75, 76-100
  % of contract price (face value of this bond ?
    5, 10, 15, 20, 25, 30, specify
  Range of cost (commission) of this bond ? (in % of bond face value)
.25-.50, .51-.75, .76-1.00, 1.01-1.25, 1.26-1.75, 1.76-2.00
  % of Cash Margin (as % of bond face value) ?
0-5, 6-10, 11-15, 16-20, 21-25, 26-30,31-40,41-50,51-100
- Discussion:

- Retention Bond :
  % of contracts number that required this bond ?
    0-25, 26-50, 51-75, 76-100
  % of contract price (face value of the bond ?
    10, specify
  Range of cost (commission) of this bond ? (as % of bond face value)
.25-.50, .51-.75, .76-1.00, 1.01-1.25, 1.26-1.75, 1.76-2.00
  % of Cash Margin (as % of bond face value) ?
0-5, 6-10, 11-15, 16-20, 21-25, 26-30,31-40,41-50,51-100
- Discussion:

- If other, please specify:
- Discussion:

- Loans:
  - short term loans
    - progress payment financing
    - overdraft
    - short loans (max. 12 months)
  - term loans (max. 3 years)
  - long term loans
  - if other, please specify:
- Discussion:

- Letter of Credit
  - acceptance
  - sight
  - refinancing letter of credit
- Discussion:

- Leasing:
  - operating lease
  - financial lease:
    - direct lease
    - sale-leaseback
    - vendor lease
- Discussion:

6. Types of security usually provided to lender for credit facilities:
- acceptable bank counterguarantee
- corporate letter of guarantee
- assignment of contract proceeds, acknowledgment of assignment
- personal guarantees
- asset for collateral
- cash margin
- if other, please specify:
- Discussion:

7. List of requirements for obtaining financial services from lenders:
- description of proposed work
- prequalification document
- list of value of work already on progress
- balance sheet & income statements for at least previous years
- cash flow, indicating withdrawal and payment schedule
- complete contract drawings
- specifications including special conditions
- contract agreement
- subcontract agreements
- construction schedule & program
- summary of proposed financial needs with attached securities
- contractor's future business plans (diversion of funds)
- a guaranteeing bank
- if other, please specify:

8. Owners requirments from the contractor to receive final payment/retention:
- zacat (income tax) certificate
  - for foreign contractor: % of profit : 25%, 35%, 40%, 45%
  - for Saudi contractor : % of net worth : 2.5%
- certificate from labor and work office that the contractor has paid all of his employees
- visa clearance certificate
- if other, please specify:

9. Please indicate major financial problems faced while working in Saudi Arabia. (rank them by seriousness)*
   Examples:
   - too much competition
   - competitors bidding below cost
   - delay in payment from owner
   - dealing with lenders (banks)
   - delays caused by consultants
   - issuing zakat/income tax certificate
   - few projects being offered
   - cash margins blocked by banks

   * rating system definitions:
   A: very serious (significant delay and/or cost increase)
   B: serious (small delay and/or cost increase)
   C: irritating (no serious effect, requires minor rescheduling)

   - Discussion:

10. Penalties
   - Discussion
     - types of penalties
     - maximum amount of penalties

11. Proposed alternative ways of contractor financing

12. Anticipated difficulties for the above alternatives

D. THE FINAL ZAKAT/INCOME TAX CERTIFICATE FORM

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SAUDI DANISH BANK المملكة العربية السعودية 223 K

وزارة المالية والاقتصاد الوطني

مصلحة الزكاة والدخل

رقم الملف ٠٠٢١١/٠٤/٣٦ الرقم ٠٠٩٠٠

التاريخ ١٤٠٦/٠٩/٠٣هـ

الإداره العامه

*** شهادة نهائية ***

تشهد مصلحة الزكاة والدخل بأن المكلف :-

<<<شركه الدنشاءات السعوديه الدنمركيه >>>

قد انهى وضعه الزكوي /الضريبي مع المصلحه عن السنه الماليه المبتدئه في : ١٩٨٣/٠٧/٠١ والمنتهيه في : ١٩٨٤/٠٧/٣٠ وهذه الشهاده صالحه لصرف الاقساط الاخيره المستحقة للمكلف عن العقود التي تم إنجازها خلال تلك الفتره ، كما تخوله الحق في دخول المناقصات ، وصرف الاقساط العاديه والغير نهائيه ، حتى نهاية سريان مفعول هذه الشهاده الواقع في : ١٩٨٥/٠٩/١٥ >>>

(اليوم الخامس عشر من شهرسبتمبر سنة الف وتسعمائه وخمس وثمانين)

١٤٠٦/٩/٤

المملكة العربية السعودية وزارة المالية ١٣٧٠ مصلحة الزكاة والدخل الختم

الوظيفة : المدير العام بالنيابه

التوقيع :

اسم صاحب التوقيع : صالح أحمد شته

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VITA

Salah Uthman Al-Dulaijan was born in Al-Khobar, Saudi Arabia, on November 20, 1960. Upon graduating from secondary school, he enrolled at King Fahd University of Petroleum & Minerals (KFUPM). In January 1984, he graduated with B.S. with honors in Civil Engineering. In May 1984, he joined the KFUPM as a Graduate Assistant, subsequently studying for a Master's Degree in Construction Engineering and Management. During this time, Mr. Al-Dulaijan attended short courses on Effective Construction Management and Value Engineering offered by the Department of Construction Engineering and Management.

4. It was found that contractors with low annual average value of work of less than SR:50 million are meeting between 30 and 50% of their financial needs from their internal finances. On the other hand, contractors with high average annual value of work, over SR:100 million, are meeting between 10 and 20 percent of their financial needs from their internal financing sources, which means that they are dealing more with commercial banks.

5. Previously, during the boom period (1978-82), commercial banks were approving financial facilities without any known strategy, detailed analysis and intensive required securities, resulting in severe losses to banks from bad debts. Lately, the commercial banks are conducting certain planned strategies, detailed analysis and enforcing intensive securities requirements from their clients (contractors) before they issue any financial facility.

6. Some commercial banks are controlling their relations with construction companies by applying certain strategies such as requiring limitations from contractors to reduce the risks associated with the construction industry (e.g. limiting the minimum levels of sales or biddings, and net worth for both specialized and general contracting firms for different categories of companies).

7. The construction projects in the Kingdom have become more sophisticated lately and are now oriented towards hi-technol-